

# Research



Research in the Department of Plant and Soil Science at Texas Tech University is addressing the needs of the Texas wine and grape industry.

The overall objectives of our research programs are to improve profitability for producers and the sustainability of the industry.

## **Site Selection for Vineyards**

We are developing a web-based interactive geographic information system for vineyard site selection. This will allow the various attributes of potential vineyard sites throughout the state's winegrowing regions to be evaluated. In other research, we are studying the connections between soil nutrients and wine quality.

Contact Dr. Ed Hellman ([ed.hellman@ttu.edu](mailto:ed.hellman@ttu.edu))

## **Grape Physiology**

Researchers are seeking to understand the underlying physiological differences among grape varieties. Grape growers need to better understand of how grape varieties adapt to climates, soils, and pests found in West Texas. Variety selection and rootstock evaluation are underway in order to determine suitability for soil conditions and pest resistance. Current research involves evaluating grapevine stomatal conductance, photosynthetic response to leaf temperature, and rooting response of PD-infected grapevine cuttings.

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## **Wine Quality**

Research is currently focused on improving wine quality through better understanding and control of oxidation processes as well as through the evaluation of new methods of wine stabilization and fining. In particular we are evaluating phytic acid as a wine stabilizer. We are also investigating potential relationships among soil and vine nutrient status in Texas vineyards to resultant wine quality.

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