



CAES Viticulture



Welcome to The Connecticut Agricultural Experiment Station Viticulture Information Page

This page is maintained by [William Nail](#) and [Vickie Bomba-Lewandoski](#). Please address questions or concerns to Dr. Nail.

Grape Research at CAES



The viticulture program at CAES conducts research to benefit Connecticut grape growers. Current research areas include:

- Cultivar, clone, and rootstock evaluation
- Effects of graft union height on vine performance
- Pruning and training of hybrid grapevines
- Effects of leaf removal and fruit thinning on carbon partitioning
- Effect of horticultural oil on photosynthesis and fruit set
- Fruit thinning effects on fruit quality

Upcoming Events

[American Society of Enology and Viticulture Annual Meeting](#), June 24-28, in Monterrey, CA. This is the national meeting for viticulture and enology professionals, and will include research reports, industry seminars, and rootstock and tannin symposia.

[American Society of Enology and Viticulture- Eastern Section](#), July 15-18, Winston-Salem, NC. This is the eastern branch of the national ASEV, and always provides a great deal of information for eastern growers and winemakers. This year's program includes a tour of North Carolina wineries on the 15th and a symposium on Advances in Red Wine Production: Vine to Wine on the 18th.

If you'd like me to add an event to the list, please [contact me](#).

CHECK BACK every so often for information on upcoming grower workshops and meetings.

eViticulture NOW ON LINE

After a great deal of time and effort, a national comprehensive [viticulture web site](#) is now on line. This site continues to improve. All material has been written by viticulture professionals, and reviewed by two other experts.

Many of the articles are also available in Spanish. This should prove to be an invaluable resource to all grape growers.

New Publications and Web Sites

[Effective Vineyard Spraying](#), by [Dr. Andrew J. Landers](#) of [Cornell University](#). Dr. Landers is one of the foremost authorities on sprayer technology in the country, and his new book provides invaluable information to this very important topic.

The [“Everything Grape” Video Gallery](#), from the [University of Vermont](#), has a collection of on line videos from all over the country demonstrating a great range of viticulture topics.

The [Wine Grape Production Guide for Eastern North America](#) is the book we’ve all been waiting for. This is the most comprehensive book on grape and wine production in the east available. All aspects of viticulture are covered. Individual chapters are written by experts in their field.

[A Review of Cold Climate Grape Cultivars](#) by [Lisa Smiley](#). This is also [available on CD](#). This review is probably the most current and comprehensive source of information on cold climate cultivars.

[Winter Injury to Grapevines and Methods of Protection](#). Several years in the making, this excellent publication deals with one of the major limiting factors to growing many winegrape cultivars in Connecticut.

Viticulture and Enology Library

A viticulture and enology library has been established at The Connecticut Agricultural Experiment Station in New Haven. This was made possible by a generous grant from the Connecticut Farm Wine Development Council, and includes publications for both beginning and experienced growers. If you would like to visit the library, please [contact Dr. Nail](#) for hours and location information.

CAES Viticulture e-Newsletter

I occasionally produce a newsletter highlighting current and future vineyard activities, released on a somewhat irregular schedule. If you would like to receive this newsletter, please [e-mail me](#) and I will add your address to the list of recipients.

Selected Viticulture Resources for Connecticut Growers

NOTE: Some of these documents are provided in Adobe® Acrobat™ (.pdf) format. If you do not have Adobe® Acrobat™ Reader to view and/or print your these documents, you will need to download the Adobe® Acrobat™ Reader. To get a free copy of the software, click the "Get Acrobat" image.



[Winegrape Cultivar Trials in Connecticut 2004-2006](#) gives the result of our cultivar evaluations. The results from these trials from 2007 through 2009 will be available soon.

[Grapevine Cultivation in Connecticut](#), a CAES bulletin, is a basic guide to grape growing in the state ([contact me](#) if you would like a hard copy mailed to you).

The [New England Wine Grape Grower’s Resource Center](#), hosted by the [University of Massachusetts Cooperative Extension](#), is the most comprehensive source of current information for New England grape growers.

The [University of Connecticut's Grape IPM](#) page (click on "Grape IPM" on the left) contains up to date weather and vineyard [scouting reports](#) during the growing season from several Connecticut vineyards.

Pest Management Publications

Management of fungal diseases of foliage and fruit can be the most challenging aspect of growing many grape varieties in Connecticut. Excellent resources include:

The [New York and Pennsylvania pest management guidelines for grapes](#). This book is comprehensive and updated annually. The 2013 edition should be out in March or April. The free online version is bulky when printed; the easier to handle book version can be ordered by calling (607) 255-7282.

There is also an excellent [supplement](#) (the 2013 version has not yet been released) to the guide by Dr. [Wayne Wilcox](#), Professor of Plant Pathology at [Cornell](#). Here, he talks about experiences in the Finger Lakes region in the past couple of years, new fungicides,, and how to adapt what they've learned to the current growing season.

Both of the above stress the need to alternate fungicide classes to avoid resistance.

[A Pocket Guide for Grape IPM Scouting in the North Central and Eastern U.S.](#) is a portable field guide with excellent color photos for identifying pests, available from [Michigan State University Extension](#).

The most comprehensive guide to grape pathogens is the [Compendium of Grape Diseases](#) by R.C. Pearson and A.C. Goheen, available from APS Press. This compendium has photos of most all diseases and disorders of grapes. Especially useful are the life cycles of major grape diseases, a topic that too many growers overlook but which is critical for implementing pest management strategies.

Cornell also has several grape [Pest Fact Sheets](#).

Cold Hardiness

Winter injury is frequently a problem in Connecticut vineyards. Besides bud damage that reduces fruitfulness in the subsequent growing season, trunk damage after a severe winter event can lead to eventual crown gall disease.

[Winter Injury to Grapevines and Methods of Protection](#) is the most comprehensive Extension publication available on a subject that is very important to Connecticut growers. It is available from [Michigan State University Extension](#).

The late Dr. [Bob Pool](#) of Cornell published a very practical guide for [assessing winter injury and bud damage](#).

Two excellent, if fairly technical, papers on cold hardiness are available as free downloads:

[Anatomy of Winter Injury and Recovery](#), by Martin C. Goffinet of [Cornell](#).

[Grapevine Cold Hardiness: Mechanisms of Cold Acclimation, Mid-Winter Hardiness Maintenance, and Spring Deacclimation](#) by Stan Howell, recently retired after 37 years at [Michigan State University](#).

Internet Resources

This is a very short list of resources that many have found to be of value, and is not meant to be comprehensive. Please [contact Dr. Nail](#) if you have any suggestions that you have found particularly useful and would like to share with others.

The [National Grape Registry](#) is the most comprehensive resource for [grape varieties](#) and [nurseries](#).

Dr. [Bruce Reisch](#) of Cornell has a list and description of [grape varieties](#) specifically for cool climate areas.

A comprehensive list of Cornell's grape publications, most available for downloading, can be found at the [Cornell Grape Page](#).

[Michigan State University](#) has a very useful guide to [vineyard management](#). The [vineyard scouting](#), [pest management](#), and [cultural practices](#) sections are very good and relevant to Connecticut growing conditions.

Both the [Penn State Wine Grape Network](#) and the [Texas Winegrape Network](#) are excellent gateways to resources. Included in the latter is a page devoted to [business and economics](#), listing resources from several sources; many are relevant to Connecticut growers.

[Virginia Tech](#) and [Virginia Cooperative Extension](#) have put together an excellent manual on [site selection](#) for Virginia, available both as a web document and as a [PDF document](#) (although the latter will be frustrating to those without high-speed internet access, as the file is about 11,000 KB in size; also, downloading this PDF has been known to cause Adobe Acrobat to crash). Of course, much of the information in the bulletin doesn't apply to Connecticut, but the overall principles of site selection are universal. Of particular use to potential Connecticut growers are the sections on frost and extreme low temperatures (p. 3-8; page numbers refer to the PDF version), elevation and topography (p. 14-17), and soils (p. 18-24).

Bruce Zoecklein, who recently retired from [Virginia Tech](#), has an excellent [enology site](#), and produces a timely e-mail newsletter that you can subscribe to.

The USDA has recently developed a [Cost of Production Calculator](#) and an [Online Self-Assessment Tool](#) for Sustainability. While these were developed for the west coast, they should be mostly applicable to Connecticut conditions.

[Iowa State University](#) has a worksheet for estimating the [costs and returns](#) of vineyard establishment:

Very comprehensive [financial worksheets](#) are also available from Ontario.

The [University of California at Davis](#) has a new [Integrated Viticulture Online](#) web site encompassing all aspects of viticulture. It is, of course, oriented to the California industry, but much of the information is relevant to Connecticut growers.

Please report any errors or suggestions to William.Nail@ct.gov.

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