University of California
Agriculture and Natural Resources

Vine Lines

San Joaquin Valley Viticulture Issues

February 2014

UC Cooperative Extension — Fresno County

2013 PD Research Symposium

In December, some of the world's leading pest control and viticulture experts gathered in Sacramento to discuss the latest findings in the fight against Pierce's disease (PD) and the glassy-winged sharpshooter (GWSS).

Nearly 100 researchers, government officials and winegrape growers attended the 2013 Pierce's Disease Research Symposium, organized by the California Department of Food and Agriculture's PD Control Program. Attendees covered a broad array of issues during a packed two-day program. Topics ranged from simple tweaks involving traditional pest control methods to complex techniques utilizing novel ways to stop the disease. Special guest speakers also updated the group on successful policies and programs being tested statewide, as well as emerging threats overseas.

During the poster sessions, researchers were able to show just how far their research has gone in recent years, and the many projects that are close to producing actionable, commercially-appealing control methods.

"We're halfway down the field towards a touchdown and the next step is critical. With a little bit of funding and hard work, we can turn our research into something practical. I'd usually say don't look a gift horse in the mouth - but I'm sure looking," said David Gilchrist, a professor of plant pathology at UC Davis who has demonstrated a new technique to protect vines from Pierce's disease.

The symposium provides a rare forum for Pierce's disease researchers to meet and exchange ideas, encouraging scientific collaboration and accelerating progress towards finding a solution to the disease. The 2013 Symposium Proceedings are available online and can be downloaded here in PDF format. Printed copies are also available and can be requested from the Pierce's Disease Control Program by calling 916-900-5024.

In this Issue:

Using Google Earth to Verify Your GPS

Stephen Flanagan

With the advent of the smart phone and free mapping tools like Google Earth, field researchers, growers and allied ag industry personnel have powerful tools for making detailed plot maps and verifying permanent markers. This tech update covers using a smart phone to verify a permanent marker with your smart phone.

Say you are standing at a permanent marker and you record this point on your smart phone's Global Positioning System (GPS) application. Now what? How accurate is your smart phone in locating this point? In this example we will confirm the location of an irrigation valve (Fig. 1) which was used as a permanent marker for a California artichoke trial. Note: The smartphone application also known as an "app" can be found under maps or navigation.

Figure 1. Ariel view of drip valve (green pin) and GPS waypoints.

How close is your GPS reading to your landmark? What's the actual distance difference? Use the Google Earth ruler selecting the two points and you will see that the phone coordinates were off by ~16 feet, but clearly close enough for someone to find the valve (Fig. 2).

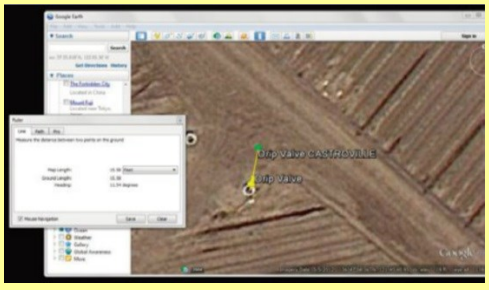


Figure 2. Google Earth aids in calculating the difference in distance.

How to send a set of Google Earth coordinates to your desktop computer.

1.) Use your phone or GPS handheld device to record a waypoint (e.g., longitude and latitude) located at your permanent marker. Here's a screen capture from a Samsung phone:

Grape Pest Management

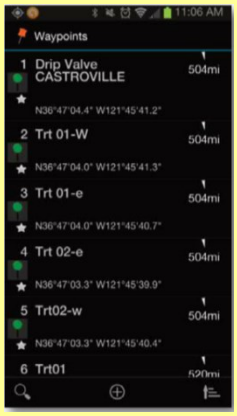


Figure 3. Android waypoint screen.

2.) Use the export function to send the waypoint (#1 in this example) in KML format, usually this is sent via email on a phone or a data stick or external cable for a handheld GPS device (Fig. 4).

Figure 4. Exported file from a phone.

3.) The email will have an attached file of the point you have marked, which when double clicked, the attachment will ask you to open in Google Earth (note; Google Earth needs to be downloaded and installed beforehand). You should then see a map of your site with this waypoint mapped. At this point use the ruler tool to compare how your GPS coordinates vary from the actual point located on Google Earth, as shown in Figure 2. For verification purposes several waypoints taken over several hours or different days will help determine how accurate your GPS device is depending on the number of satellites it tracks at any one time.

This information and other GPS-Phone mapping tricks are available under *Tricks of the Trade* at: http://wrir4.ucdavis.edu/resources/

CURRENT WINE AND WINEGRAPE RESEARCH

UCD Conference Center
FEBRUARY 12, 2014

8:30-9:00 Coffee and Registration
9:00-9:10 Welcome and Introductions – Deborah Golino, UGMVE Director

Session 1:
9:10 PD Resistant Wine Grapes Coming Soon – Andy Walker, Dept. of Viticulture and Enology, UC Davis
9:30 Breeding for Genetic Resistance to Powdery Mildew - Dario Cantu, Dept. of Viticulture and Enology, UC Davis
9:50 Berry Physical Properties and Fruit Cracking – Ken Shackel, Dept. of Plant Sciences, UC Davis
10:10 Update on temperature profile and temperature inversion studies - Mark Battany, UCCE, San Luis Obispo and Santa Barbara Counties
10:30–10:40 BREAK

Session 2:
10:40 Trends in Preventative Trunk Disease Management and Grower Perceptions of Practice Efficacy – Kendra Baumgartner, USDA, UC Davis
11:00 Current Research: Mealybug Transmission of Leafroll Disease in Vineyards – Kai Blaisdell, Dept. of Environmental Sciences, Policy and Management, UC Berkeley
11:20 Working with Workgroups: A Neighborhood Approach to Area Wide Disease Management of GLRaV-3 in California Vineyards – Kari Arnold, Dept. of Plant Pathology, UC Davis
12:00–12:45 CATERED LUNCH

Session 3:
1:00 Influence of Grape and Wine Production Practices on Tannin Extractability and Activity - James Kennedy, Dept. of Viticulture and Enology, CSU Fresno
1:20 Measuring and Managing Oxidation and Sulfur Dioxide – Andrew Waterhouse, Dept. of Viticulture and Enology, UC Davis
1:40 Wine Maturation: Barrels versus Micro-Oxygenation and Oak Alternatives – Anita Oberholster, Dept. of Viticulture and Enology, UC Davis
2:00 Assessment of Difficult to Ferment Juices – Linda Bisson, Dept. of Viticulture and Enology, UC Davis
2:20 Improvement of Wine Quality: Tannin and Polymeric Pigment Chemistry - James Kennedy, Dept. of Viticulture and Enology, CSU Fresno
2:40–2:55 BREAK

Session 4:
3:00 The Economic Benefits from Certified Virus-Free Nursery Stock - Kate Fuller, Dept. of Agricultural Economics, UC Davis
3:20 Effects of grapevine red blotch disease on canopy symptom development and fruit maturity in 3 varieties - Rhonda Smith, UCCE, Sonoma County
3:40 What Do We Know About the Etiology and Spread of Grapevine Red Blotch-Associated Virus? – Mysore Sudarshana, USDA, UC Davis
4:00 Application of Next Generation Sequencing to Facilitate the Release of New Grapevine Accessions in Quarantine and Certification Programs - Maher Rwahnih – Foundation Plant Services, UC Davis
4:30 WINE SOCIAL – Meet the researchers; sponsored by the American Vineyard Foundation and the National Grape and Wine Initiative

Click here to register.

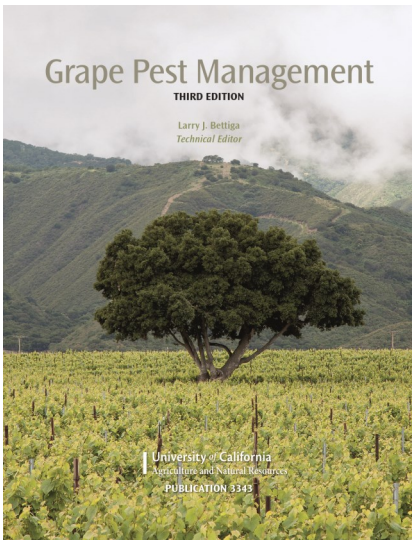
Publications from the University of California

GRAPE PEST MANAGEMEN—Third Edition

Grape pests and diseases cause significant economic losses to California's wine, raisin and table grape vineyards annually. Grape growers rely on University of California researchers and others for information that allows them to make sound management decisions.

In the much anticipated 3rd edition of Grape Pest Management, more than 70 research scientists, cooperative extension advisors and specialists, growers, and pest control advisers have consolidated the latest scientific studies and research into one handy reference. The result is a comprehensive, easy-to-read pest management tool.

New information includes information on several new invasive species that are now major pests. It also reflects an improved understanding among researchers and growers about the biology of pests. With nine expansive chapters here's more of what you'll find:



- Diagnostic techniques for identifying vineyard problems
- Detailed descriptions of more than a dozen diseases
- Comprehensive, illustrated listings of insect pests
- Regional calendars of events for viticultural management
- Up-to-date strategies for vegetation management
- Up-to-date strategies for vegetation management

609 pages

$100.00 + tax and shipping
ANR Publication # 3343
ISBN 978-1-60107-800-1

ORDER FORM

Publication	Number	Qty.	Price	Subtotal
Grape Pest Management	3343		$ 100.00	
Tax = 8.225%				
Shipping =			$ 15.00	
Total =				$

Name
Address
City, State, Zip
Phone ( )

Check Payable to UC Regents

Send check and order form to:
UC Cooperative Extension
550 E. Shaw Ave. Suite 210-B
Fresno, CA 93710

UNIVERSITY OF CALIFORNIA
COOPERATIVE EXTENSION
County of Fresno
550 E. Shaw Avenue Ste. 210
Fresno, CA 93710

RETURN SERVICE REQUESTED

Vine Lines

San Joaquin Valley Viticulture Issues

Vine Lines is produced by UC Cooperative Extension. Contact the office to be added to the e-mail list.

550 E. Shaw Avenue Ste. 210-B
Fresno, CA 93710Z
Hours: 8:00—5:00 M-F
(559) 241-7515
Visit us online at
http://cefresno.ucdavis.edu

In this Issue:

Our programs are open to all potential participants. Please contact the Fresno County UCCE office, (two weeks prior to the "scheduled" activity), at 559-241-7515, if you have any barriers to participation requiring any special accommodations.