



your Lake County HORTICULTURAL NOTES

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GUIDELINES FOR PHYLLOXERA DETECTION IN VINEYARDS

The following statement was recently issued by the UC Davis Phylloxera Task Force. Grower and PCA comments/questions should be directed to the local UCCE office. NOTE: LATE SPRING IS AN IDEAL TIME TO DETECT PHYLLOXERA; THE SOIL IS MOIST BUT NOT SATURATED.

Over the past few years, several new phylloxera infestations, associated with vineyard decline, have been reported in North Coast vineyards thought to be planted on resistant rootstocks. In response to industry concern about these apparent rootstock failures, the Department of Viticulture and Enology at UC Davis formed the Phylloxera Task Force to coordinate research efforts and to facilitate communication with grapegrowers. In late 1988 the Task Force released a statement, "Phylloxera and the Use of AXR#1 Rootstock in California Vineyards," that describes in some detail the status of the problem and concerns. If you have not seen this document, ask your local UC Farm Advisor for a copy (also available from Lake County Grape Growers Association office).

An intense field effort is planned for spring and summer of 1989 for detecting phylloxera-related vineyard decline in California, with emphasis on North Coast vineyards. The primary goal of this effort is to determine if biotype "B" phylloxera is widespread. As an aid to growers, guidelines for diagnosing phylloxera problems are described below, and are comprised both of background data from vineyard records, as well as field observations from the 1989 season.

Background - This information should be gathered as much as possible before contacting UCCE Farm Advisors or the Agricultural Biologist.

1. Rootstock variety and quantity, nursery source, and certification tags, if available;
2. Year that the vineyard was planted, year that decline was first noticed, and the number and size of declining areas.

Current Season's Observations and Activities

1. Retain all rootstock suckers for possible identification of "off-type" rootstocks;
2. Document the size of declining areas - count the number of dead vines and/or give a vigor rating to affected vines in the declining area (ex. 1=healthy, 2=mildly stunted, 3=severely stunted, and 4=dead vine, or replant where a vine had died), and map the area on a graph paper as a record;
3. Dig for roots around "normal" vines in and around the affected area, inspect and examine them for the presence of phylloxera;
4. Check remaining vineyard blocks by ground observation or by aerial photography for presence of small satellite spots of weak-growing vines.

The source of planting material is very important. It is strongly believed that in the early to mid-1970's a few commercial nurseries (now out of business) were selling non-certified "AXR" which was not true to type. When suckers are produced in vineyards established with this material, a mixture of rootstocks can be seen, including St. George and vinifera x rupestris hybrid "off-types" of different parentage than AXR#1. Although these hybrids closely resemble AXR#1, they are believed to be less resistant to phylloxera than true AXR#1.

Retention of rootstock suckers is crucial to determining their trueness-to-type. A collection of these "off-types" will be planted at Davis for the purposes of further investigation. Documenting the size of the declining area is important for determining the rate of spread and for estimating the productive life of the vineyard. This calculation, presented in articles by Wildman (1986) in the American Journal of Enology and Viticulture, is given in the following example equation:

$$\text{Rate of increase} = \frac{(\text{number of vines affected in 1989})}{(\text{number of vines affected in 1988})}$$

for example, if 20 vines were affected in 1988 and that grew to 50 in 1989, then:

$$\text{rate in increase} = \frac{50}{20} = 2.5 \text{ or } 250\%$$

Grapevines may decline in discrete areas for many reasons, such as soil-related problems, oakroot fungus, etc., so phylloxera must be observed in significant numbers on vine roots in and around the affected areas in order to establish a causal relationship. It has long been known that AXR#1 roots support a small phylloxera population so that the presence of phylloxera alone is not evidence that it is the cause of decline.

Phylloxera detection is not difficult. The insects can be seen with a standard 10-power hand lens. As an aid to proper identification, photos of phylloxera adults, crawlers and eggs can be found in the UC/ANR publication "Grape Pest Management" (#4105). During the summer and fall months the insects are more readily detected because of greater seasonal numbers and bright yellow color.

Phylloxera are best found on roots in moist soil and on moderately affected vines. Their populations are reduced in dry soil. In wet soil the muddy condition of the roots obscures phylloxera presence. Very weak vines with very limited root systems do not support large populations of phylloxera. Roots should be dug from nearby moderately affected vines which should have larger, more easily detectable infestations.

When phylloxera infestations are found or suspected, you are encouraged to call your local UCCE Farm Advisor for confirmation (NOTE: In Lake County growers should contact Chris Twohy, Agricultural Biologist responsible for enforcing the Phylloxera Ordinance-Rachel). Efforts will be made to visit the site and document the problem. In a limited number of cases, as resources allow, phylloxera will be collected and returned to the laboratory where the biotype will be assayed.

In summary, it is not to be assumed that new reports of phylloxera-related decline are necessarily due to Biotype "B"; these may be cases of phylloxera-susceptible rootstock "off-types" incorrectly sold as AXR#1, or to other possibilities outlined in the Task Force statement. Much more investigation is needed. As information becomes available, it will be communicated by the Phylloxera Task Force through Farm Advisors' newsletters, and grape industry publications.

UC Davis Phylloxera Task Force

James Wolpert, Extension Specialist, Viticulture & Enology
Austin Goheen, Emeritus Plant Pathologist, USDA
Michael Mullins, Chair, Viticulture & Enology
Carole Meredith, Assoc. Professor, Viticulture & Enology
Jeffrey Granett, Chair, Entomology
Mark Kliever, Professor, Viticulture & Enology
Amand Kasimatis, Emeritus Viticulture Specialist
Harold Olmo, Emeritus Professor, Viticulture & Enology
Lloyd Lider, Emeritus Professor, Viticulture & Enology
Robert Ball, Director, Foundation Seed & Plant Materials Service

PESTICIDE REPORTING - LOCAL MEETING UPCOMING

Lake County Dep't. of Agriculture would like ALL growers who use pesticides to attend a meeting to discuss the most efficient way to implement a CDFA proposal to require reporting of all pesticides, both restricted and non-restricted. A second major topic of discussion will be the environmental and public health concerns over the use of copper and sulfur dust. Call the Ag Department at (707) 263-2271 for further information.

WHEN: Wednesday, May 17, 1989, 1:30 p.m.

WHERE: Clear Lake Grange
1510 Big Valley Rd.
Finley

YOUR INPUT IS NEEDED BY THE DEPARTMENT - DON'T BE LEFT OUT!

KIWIFRUIT MEETING

The Sacramento Valley Kiwifruit Grower Meeting will be held the morning of May 16 in Yuba City. Proposed topics include summer pruning, fruit maturity standards, and a discussion on where the industry will be in five years. When the final agenda is circulated, local growers on the kiwifruit mailing list will be mailed a copy, or, give me a call a week or so before the meeting.

1988 WALNUT COST STUDIES

Contact me for copies of:

1988 Sample Costs to Produce Hartley Walnuts in the
Sacramento Valley (.45 to cover xerox costs)

1988 Sample Costs to Establish and Produce Lateral Bearing
Walnuts in the Sacramento Valley (.55 to cover xerox)

Both of these studies are for irrigated orchards, but should be useful as a general guideline for determining current costs of various orchard practices and equipment.

U.S. PEAR MARKETS AT STAKE: A LOOK AT OUR COMPETITION

The above-titled paper was delivered at California Pear Growers annual Pear Day, March 10, 1989, by Dr. Jerome Siebert, Extension Agricultural Economist at UC Berkeley. Dr. Siebert, formerly Director of Cooperative Extension, along with other UC economists, is currently studying the factors that influence the competitiveness of the California pear industry. If you would like a copy of the paper, please contact our office.

CALIFORNIA WALNUT COMMISSION 1987-1988 ANNUAL REPORT

If you missed the extremely informative March grower meeting featuring representatives of the Commission, contact me for the report, which covers: history and role of the Commission; importance of exports; market developments in Australia, Italy, UK, West Germany, Spain, Japan, and Taiwan; government relations (i.e. elimination of trade barriers); grower-Commission relations; and Commission budget. Growers are all too often caught up in production and not often enough in marketing. Knowing who sells your crop and how they are doing is critical!

1989 WINTER MEETINGS

Meetings for all commodities, as well as pesticide safety and frost protection, are over. Thank you all for attending. I am especially grateful that due to grower support, 70 Spanish-

speaking personnel attended the Spanish language meeting on January 31. This is comparable to much bigger counties and indicates that local growers are aware of the need for maintaining a competent and healthy labor force.

A special thanks to Lake County Farm Bureau, Lake County Grape Growers Association, Moyer Products, Rainbow Agricultural Services, and United Ag Products for donating room rental fees, help with registration, publicity, equipment, and refreshments. I could not operate very efficiently without you.

Sincerely,

A handwritten signature in cursive script that reads "Rachel".

Rachel Elkins
Farm Advisor