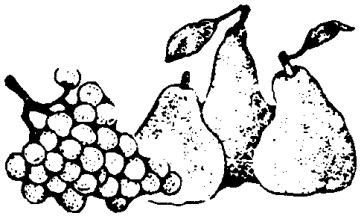
COOPERATIVE EXTENSION
University of California - Sacramento County
Tree and Vine Newsletter



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September 1998

FIELD MEETING
CODLING MOTH AND PEAR SCAB

Tuesday, Sept. 22, 1998, 8:30 to 10:30 a.m.
Glannvale Ranch (J. McCormack),
2250 Twin Cities Rd. (1½ miles west of I-5)

You are invited to participate in this field meeting, in which we will discuss codling moth and pear scab control options. The meeting will be fairly informal, and I hope to stimulate discussion among the participants.

The meeting location is one of several orchards that have received 5-acre applications of ethephon to test its effects in commercial settings. Ethephon is a plant growth regulator sprayed after harvest to quickly ripen the remaining fruit, preventing the codling moth larvae infesting the fruit from completing their life cycle. We will discuss ethephon and look at its effects.

Pear scab was a serious problem in 1998, and several growers are considering spraying urea before leaf fall to speed the decay of fallen leaves, reducing the overwintering sites for the organism. Recent research showed that dipping leaves in either lime sulfur or urea greatly reduce the production of scab spores the following winter and spring. However, field-scale trials in Mendocino County showed little reduction in scab infections the following season. This lack of efficacy may be a result of the small size of the plots used (10 acres), since scab spores may blow in from several miles away. Doug Gubler will discuss the value of this practice and springtime scab control.

Meeting Topics

Pear scab control methods
Doug Gubler, Plant Pathology Dept., UCD
Pear Pest Management Alliance grant
Chuck Ingels, UCCE Sacramento Co.
Current and new insecticides for codling moth management
Bob Van Steenwyk, Insect Biology, UCB
Mating disruption: Economics, dispensers, efficacy
Facilitated discussion

REGIONWIDE MATING DISRUPTION?

A considerable amount of pear acreage is currently under mating disruption in the Sacramento River District. Mating disruption has been shown to work effectively when combined with one, and occasionally two, organophosphate insecticide sprays. And with the Isomate C+ dispensers, one early spring application is now sufficient to last through the season, thereby making mating disruption comparable in cost to four Penncap-M sprays in most cases. Furthermore, this year's very low codling moth populations should result in low codling moth pressure next spring. Also, the restrictions in the use of Guthion and potential loss of Penncap-M and Guthion in the future mean that management strategies will need to change. Even if Penncap-M is retained as is, resistance to Penncap-M is predicted to build up with 3 to 4 applications per year with no rotation with Guthion.

So why not begin a mating disruption program next spring? It seems like the time is right for nearly all River growers to use mating disruption. In fact, there may be benefits for all River growers if the entire district became a cloud of pheromone. However, one limitation is that some orchards typically have very high codling moth populations, which may require two sprays in addition to mating disruption, increasing costs.

If Penncap-M is lost, codling moth management in the future will likely involve a number of tactics and may mean slightly more codling moth damage. Control strategies will probably include mating disruption, insect growth regulators, postharvest control, and limited organophosphate sprays. Many of these methods are available currently or will be available in the very near future. Let's start with mating disruption this next season if you haven't already; it is a proven technology that is available now.

1998 TESTING FOR STREPTOMYCIN RESISTANCE

This spring, I collected fire blight strikes from 16 growers (26 orchards, including 2 apple orchards) and took them to the CDFA Plant Pest Diagnostic Lab on Meadowview Rd. for testing by Dr. Dan Opgenorth. Funding was provided by Novartis, maker of Agrimycin (streptomycin) and Mycoshield (terramycin). Streptomycin resistance has been well documented. Last year's limited testing by Dr. Steve Lindow (UC Berkeley) showed that streptomycin resistance in the Sacramento River district is fairly low overall, but that resistance in a few orchards was quite high. So this year I offered to test strikes from orchards throughout the district so growers could know the level of resistance in their orchards. The results are listed below:

No. of	Resistance Level (ppm)					
Samples	0	50	100	250	500	1000
115	70	27	6	9	7	6

It is likely that resistance over 100 ppm is reason for concern, so these growers should consider alternating their antibiotics. Those growers with strikes having high levels of resistance (1000 ppm) should probably use alternative materials first and reduce their usage of streptomycin.

We will test some orchards again next year. Let me know if you have a block you would like tested.

GRAPE ROOTSTOCK TRIAL ESTABLISHED IN POORLY DRAINED SOIL

Wilbur Reil (Yolo/Solano County Farm Advisor) and I have established a grape rootstock trial on Jefferson Blvd., north of Babel Slough Rd., in cooperation with Johas & Associates, Inc. The purpose of this trial is to determine the best rootstocks for use on soil that is poorly drained and high in clay and organic matter at depth. We are testing the following rootstocks, on both Chardonnay and Cabernet Sauvignon: 5C, 5BB, 3309C, 101-14 Mgt, 110R, Freedom, SO4, and 1616C.

The results of a previous UC Davis rootstock trial on Sutter Home's Delta Ranch, on a different soil type, have been tabulated and will be discussed in a future newsletter.

TEMPORARY UCCE PERSONNEL CHANGES

There have been a few temporary UCCE personnel changes that should have minimal impact on service to Sacramento growers. Lucia Varela (North Coast IPM Advisor) has moved to Washington DC on a fellowship with the US Environmental Protection Agency. Mario Moratorio (Farm Advisor and County Director, El Dorado County) will carry on her research and extension activities while she is away.

I will be handling Mario's tree fruit assignment during the next year, in addition to my normal tree and vine crop responsibilities in Sacramento County. Jack Orr (County Director and Farm Advisor, Sacramento County) will handle most of my environmental horticulture and Master Gardener responsibilities during this time.

FAIR OAKS ORCHARD DEMONSTRATION

Several UC Master Gardeners and I have established a small demonstration orchard in Fair Oaks Park. We are demonstrating several training systems for backyard fruit trees, many of which are used in orchards as well. The techniques used are: full-sized open center and central leader trees, perpendicular "V" peaches and nectarines, espalier trees, genetic dwarf trees, and 7-foot tall "fruit bushes." The latter method involves shearing new shoots during the growing season and thinning branches in early spring. Modifications of this simple method may have potential use in commercial orchards if labor shortages occur. Let me know if you would like to visit the orchard or to be informed of upcoming field days.

OAK ROOT FUNGUS TRIAL

In October 1994, Roger Duncan began an experiment to determine whether oak root fungus could be controlled in mature pear trees with Enzone, a chemical used for controlling nematodes, phylloxera, phytophthora, and oak root fungus in other fruit crops but not registered in pears. The experiment was conducted at Joe Greene Ranch and included three treatments: Enzone applied every year, every other year, and not at all. The Enzone was applied in 250 gallons of water and applied in a bermed area under the tree canopy. Eleven infected and stunted trees were used for each treatment.

I have continued the trial since Roger left. Through the trial, the condition of nearly all the trees has improved, perhaps as a result of improved irrigation management. Perhaps as a result, there have been no differences in either yields or pruning weights throughout the experiment.

It is questionable whether Enzone could substantially reduce the infection of older trees, since the fungus is enclosed within the bark. Enzone may have efficacy when used as a preplant material for replants. Ralchel Elkins is currently testing it for this purpose.

The California Pear Advisory Board has funded these oak root fungus research projects as part of a statewide research program being led by Dave Rizzo (Plant Pathology Dept., UC Davis).

PUBLICATIONS

Support UCCE in Sacramento County: Purchase Publications Here

Many growers, as well as the public at large, purchase and use University of California publications for useful information on a wide variety of topics. When you buy these reasonably priced publications at our office near the corner of Bradshaw and Kiefer Roads., you support your local Cooperative Extension office because we receive a substantial portion of the proceeds from the sales. You can also review the publications before you purchase them to be sure they are what you are looking for. We have nearly all the UC publications available and the price is the same as that you would pay through the UC publications catalog. Come in and check out the hundreds of publications we have!

Cover Cropping in Vineyards: A Grower's Handbook

For over 5 years, I have coordinated the writing and editing of this publication, which will be available in October. The publication has 12 chapters and 22 authors. It describes the cover crop species and their uses, cover crop systems and management, soil and water effects (soil erosion, soil ecology, soil fertility and plant nutrition, and water use), pest effects (insects, weeds, nematodes, and vertebrates), and actual practices of a number of growers. The 168-page publication should be useful to both grape and tree crop growers. It has over 150 color photos and costs $20 (plus tax).

Natural Enemies Handbook

The UC Statewide IPM project has produced this 164-page book, which draws on the experience of more than 60 experts from UC and beyond. The book has over 180 color photographs and 140 line drawings to help readers find, identify, and use natural enemies to control pests in almost any agricultural crop, garden, or landscape. The nine chapters cover the biology of hundreds of

predators, parasitoids, and pathogens that attack pest insects, mites, nematodes, plant pathogens and weeds. The cost is $35 (soft cover) or $50 (hardbound)(plus tax).

Pesticide Safety: A Reference Manual for Growers

This publication is a resource for growers preparing for the Certified Private Applicator examination. Its easy-to-read workbook format takes you through each of the steps needed to use pesticides safely and responsibly on the farm. The publication is 128 pages and costs $7 (plus tax). It is available in our office or through Communication Services (see above). Publication no. 3383.

California's Electric Industry Restructuring Handbook

The California electric industry is being restructured. How is that change going to impact the agricultural industry? What are the different options available to farmers?

The California Energy Commission, Energy in Agriculture Program has produced a handbook to answer the most frequently asked questions about restructuring, and to also identify the advantages and disadvantages of the different available options.

Call, fax, or e-mail the CEC's Energy Efficiency Hotline to get a copy of the handbook, titled "New Options for Agricultural Customers: California's Electric Industry Restructuring."

Hotline phone numbers: (800) 772-3300 or (916) 654-5106

Hotline fax number: (916) 653-7480

E-mail address: ramon@energy.state.ca.us

The handbook is easy to read and has useful suggestions on evaluating the various options and possible savings on your electric bill.