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ORCHARD FACTS

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Butte-Glenn Almond & Walnut Day

The Butte-Glenn Almond & Walnut Day will be held on February 5th at the Masonic Hall in Chico. The meeting will begin with registration from 8:00 a.m. to 9:00 a.m. and conclude by 3:00 p.m. The meeting itself is free of charge. If you wish to join us for lunch, it will cost $10. The agenda and registration form are enclosed.

Controlling Prune Aphids with Oil

Prune aphids, both Leaf Curl Plum and Mealy Plum, have emerged as the primary obstacle to the reduction or elimination of dormant insecticide sprays. Other pests such as San Jose Scale, European Red Mite and Peach Twig Borer either come under biological control, are rarely problematic or can be controlled by softer approaches such as oil sprays. Agricultural Commissioner reporting data has shown a reduction in the use of organophosphate (OP) insecticides (primarily Diazinon in this area) and an increase in the use of synthetic pyrethroids. This will reduce the amount of OPs which end up in the surface water, but is probably not the answer. Pyrethroids are generally insoluble and this will likely limit the amount that runs off. However, they are extremely toxic to fish and can kill fish at levels lower than the current detection limits. Additionally, they have been shown to kill predator mites for as much as a year after applied in orchards, potentially leading to webspinning mite problems.

Spray oils are currently the best soft approach option for aphid control. Much work has been done by UC Farm Advisors as part of the Environmentally Sound Prune Systems project (ESPS) on controlling aphids with oil sprays. This work has had mixed results. Following is a summary and some guidelines for using oil effectively provided by Bill Olson, Butte County Farm Advisor and ESPS Project Coordinator.

Summary

Dormant Treatment:

Dormant applications of oil at rates of four to six gallons per acre provide very little aphid control. Concentrate applications provide better control than dilute applications. The best percentage of control reported was 40 percent.

Delayed Dormant Treatments:

Delayed dormant (Green Tip through Bloom) treatments provided 70 to 80 percent control of mealy plum and leaf curl plum aphids. Treatments using four gallons per acre provided better control than treatments using only two gallons per acre. Higher rates of oil may provide even better control. Overall, green tip treatment programs generally seem to be more effective than full-bloom to petal fall treatment programs. Slow ground speed providing full coverage is needed, but concentrate (100 gpa) gave better results than dilute (400 gpa).

Growing Season Treatments:

Oils do not kill aphids immediately. During the growing season evaluation of aphid control from oil applications should be done no sooner than one week after application. Moderate rates of spreaders (16-24 ounces) preferably silicone based, along with the oil application aid in control. Full coverage is needed for adequate control. Two hundred gallons of water per acre provide better control than one hundred gallons and higher rate of oil also provide better control of mealy and leaf curl plum aphids (see graph).

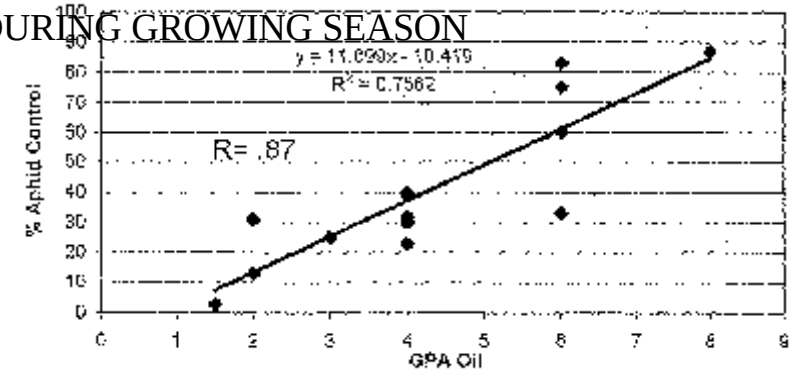
Recommendations:

Dormant: Not recommended due to little benefit.

Delayed Dormant: Timing - Green tip to popcorn [or 2 times (green tip and petal fall)]
Rate - 4 or more gallons per acre
Speed - 1.5 miles per hour
Volume - 100 gallons per acre
Expected results - 60% to 70% control

Growing Season: Rate - 6 to 8 gallons per acre
Adjuvants - 16 to 24 ounches of silicon based spreader per 100 gallons
Volume - 200 gallons per acre
Timing - Before levels are high. Ex: Less than 10% of trees having aphids
Expected Results - 60% to 70% control.

APHID CONTROL ACHIEVED USING DIFFERENT RATES OF OIL WHEN APPLIED DURING GROWING SEASON



NEWSLETTERS AVAILABLE ELECTRONICALLY

Our newsletters are now available electronically. Advantages of getting your newsletter this way include instant delivery, no waiting for the postal service to deliver it and, if you have a color printer, the newsletter can be printed in color, something we cannot do in the mailed format. Additionally, this will save on mailing costs.

To receive the newsletter electronically, you will need an internet connection, an e-mail address and Adobe Acrobat, which can be downloaded free from the internet. If this sounds good, please call our office and request this service. If you elect this option in the future, you will be notified via e-mail when new newsletters become available. You could then go to our website at www.ceglenn.ucdavis.edu and download the newsletter. With this option, you will not be mailed the newsletter.

CHILLING UNITS WEBSITE

Deciduous trees require a certain amount of cold weather during the winter in order to flower and set fruit normally. This is commonly referred to as chilling requirement. Symptoms of inadequate chilling include: delayed and extended bloom, delayed foliation, reduced fruit set and reduced fruit quality. Winter chilling is estimated by the use of chilling units. While there are at least three ways of calculating chilling units, the simplest and most common way is to accumulate the number of hours below 45 degrees Fahrenheit. As of January 22nd, we have accumulated 469 chilling hours in Orland using this method. Following are some general chilling requirements for some of our common tree crops: Almond 400-500 hours, depending on the variety; Walnuts 500-700 hours, depending on the variety, Pecans 250 hours, Pistachio 800 hours, French Prune 800 hours. Chilling unit accumulation using this method and two others can be followed by logging on to http://fruitsandnuts.ucdavis.edu and click on pomology weather services. Additional information on winter chilling is available at this site.

INTEGRATED PEST MANAGEMENT FOR ALMONDS - SECOND EDITION

The new edition of Publication #3308, Integrated Pest Management for Almonds, from University of California is now available. This new edition of the best selling guide for almonds is completely revised and expanded.

The publication covers 120 different pest problems, including diseases, insects and mites and weeds. Included also are 10 new insect pests and diseases such as *anthracnose*, alternaria leaf blight, rust, tenlined June beetle and leafhoppers.

New in the second edition you will find: * An extensively revised chapter on vertebrate pest management which adds recommendations for control techniques where endangered species occur. * A revised and expanded chapter on vegetation management including detailed information on cover crops. * A revised section on orangeworm, emphasizing cultural control techniques instead of insecticides. * A revised section on peach twig borer includes discussions of bloomtime sprays with *Bacillus thuringiensis* and pheromone mating disruption. * Revised and updated tables on susceptibility of rootstocks and scion cultivers to major pests and a detailed index. This indispensable reference is illustrated with 259 photos and 69 line drawings and tables.

Publication #3308, *Integrated Pest Management For Almonds*, is available now at the Glenn County Cooperative

Extension Office in Orland, located in the County Building on County Road 200. The publication is priced at $32.00 plus tax. For further information, please call the office at 865-1107.

SABBATICAL LEAVE

Beginning in February, I will be on a one year sabbatical leave. During this time I will be taking classes at California State University, Chico, in computer science, statistics and information technology and working on some research projects, doing some writing and some traveling next summer. I expect to return next February with a recharged battery and some new ideas and skills. Pertinent meeting notices will be sent out by newsletter. During my absence my crop responsibilities will be covered by surrounding advisors and some specialists. If you have a question, call our office and they can direct you to someone who can help you.