UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION TULARE COUNTY

May 2000

Olive Notes

Olive Fruit Fly Update

As of this writing (5/21), three confirmed olive fruit flies (OLFF) have been found in the San Joaquin Valley; one in a citrus tree in Mayfair (south of Bakersfield), one in an olive tree ½ mile away from that find, and a third in an olive tree in Reedley, south of Fresno. Two OLFF are considered an infestation and trigger action by CDFA. A Section 18 registration for Spinosad has been secured through EPA for control of OLFF.

With the Section 18 in place, CDFA will spray once in the Kern Co. infested area now. Additional treatment will be withheld until June when fruit matures enough to trigger sexual activity in the fly.

2000 Bloom Observations in Tulare Co.

Full bloom dates compared: In 1999, an extremely "late" year, full bloom occurred 20 May at our Lindcove Field Station grove. In 2000, those same trees were at full bloom 3 May, 17 days earlier.

Quantity and quality: "Spotty at best" is probably the best way to describe this year's bloom. Some groves, especially young ones or those that didn't have much of a crop last year, have a fairly good, uniform bloom. Mature groves and trees that had crops last season have relatively poor bloom this season; walking through such groves one sees "blank" trees, an occasional good blooming tree, and trees where there's bloom but simply not much of it. Bloom on the outsides of those groves is often better than that inside.

Hedged trees: In a number of cases, the one-year-old shoots that have developed on mature trees in response to hedging in '99 are not blooming, regardless of previous crop status. In such cases, hedging was relatively severe resulting in vigorous vegetative growth. Often, vigorous one-year-old shoots do not bloom – they are in fact still juvenile. Hopefully, once trees are shaped for mechanized harvest, hedging smaller wood will not result in two years of non-cropping.

Hot weather: Unknown effect at this time but temperatures were not extreme which means that trees well irrigated should set fruit normally. Stressed trees will have reduced fruit set.

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Cooperative Extension Work in Agriculture and Home Economics, U.S. Department of Agriculture, University of California, Tulare County Cooperating

Leaf Tissue Analyses – July Is the Time

Leaf tissue analyses provide excellent information to guide a grove's fertilization program. July and August are good months to take olive leaf samples for analyses of the grove's nutrient status.

The elements of most concern and that require annual monitoring are nitrogen (N), potassium (K) and boron (B).

NOTE: Always observe your trees carefully to detect visual symptoms of nutrient deficiency or excess. Visual observations provide an excellent complement to any lab analyses and indicate when special analyses are needed.

Critical Nutrient Levels for Olive[1]
July/August Leaf Samples

	Adequate	Def. Below
% Nitrogen (N)	1.5-2	1.4
% Potassium (K)	.8	.4
% Magnesium (Mg)	>.1	Unknown
ppm Manganese (Mn)	20	Unknown
% Calcium (Ca)	1.0	Unknown
% Chloride (Cl)	.5	Unknown
% Sodium (Na)	.2	Unknown
ppm Boron (B)	19-150	14(Excess>185)
ppm Zinc (Zn)	Unknown	Unknown
ppm Copper (Cu)	4	Unknown
[1]Leaves are mature from current season's shoots		

Note: if there are weak spots (weak trees) or conditions (trees of abnormal leaf color, etc.) that may be caused by nutrient conditions, leaf tissue samples from those areas can be taken anytime. But remember, collect a sample from healthy trees at the same time for comparison purposes.

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Steve Sutter, University of California Area Personnel Management Farm Advisor, has recently created a UC Davis e-mail list he will manage from Fresno called ***ag-busnet***. The electronic network will extend and supplement his printed APMP Newsletter, providing more California growers, packers, farm labor contractors, pest control operators and advisers, officials, and others with brief articles, news, and time-sensitive notices in the broad area of agricultural and personnel management.

Ag-busnet topics will include agricultural labor, payroll tax, and safety compliance, services for employers and farm workers, proposed and enacted legislation, and more. Subscription is free. You'll get an electronic confirmation and instructions. The e-mail addresses on this list are confidential. To join ***ag-busnet*** just e-mail a request that includes your name, firm or organization, city, and state to Steve Sutter at srsutter@ucdavis.edu. For further details, call Steve Sutter at (559) 456-7560.

Black Scale Control

The black scale is best controlled in August once all eggs have hatched and crawlers are out on the leaves. In the San Joaquin Valley, this is a "one generation per year insect". The adults mature in March and April, lay eggs and the crawlers (immature stages), the only stages susceptible to insecticide treatment, emerge from under the females in June, July, and August. For most effective treatment, applications must be delayed until all eggs have hatched.

Although black scale can be effectively treated from August through mid-winter, early treatments (August) are best as the longer an infestation remains in place, the more negative effect it has on the subsequent bloom – to say nothing of coating this year's crop with honeydew and sooty mold.

Irrigating Olives – Water Use for Summer and Fall

Irrigation is essential for optimal production of good quality fruit. Dr. Dave Goldhamer's research found, without question, that matching olive tree water use:

1) Provided best shoot growth.
2) Produced the best yield (fruit load x fruit size).
3) Maximized canning size fruit.
4) Maximized per acre income.

Here are historical water use figures you can use for a fully canopied (more than 50% of the ground shaded) olive grove for the remainder of the season.

	-------Orchard Water Use---------		
Date	**ETc in Period[1/] (inches/acre)**	**Daily ETc[1/] (inches/acre/day)**	**Daily ETc[1/] (gal/tree/day)**
May 16-31	2.69	0.17	47.1
Jun 1-15	3.06	0.20	57.0
Jun 16-30	3.06	0.20	57.0
Jul 1-15	3.06	0.20	57.0
Jul 16-31	3.26	0.20	57.0
Aug 1-15	2.61	0.17	48.8
Aug 16-31	2.79	0.17	48.8
Sept 1-15	2.13	0.14	39.7
Sept 16-30	2.13	0.14	39.7
Oct 1-15	1.37	0.09	25.6
Oct 16-31	1.46	0.09	25.6
Nov 1-15	0.62	0.04	11.5
Nov 16-30	0.62	0.04	11.5
Dec 1-15	0.31	0.02	5.8
Dec 16-31	0.33	0.02	5.8

[1/]ETc = crop water use

Note, if less than 50% of the ground is shaded (considered not at full water use), first, calculate the percent of ground shaded (e.g. 30%), second, multiply the percent of ground shaded (converted to a decimal) by 2 (e.g. .3 x 2 = .6), and third, multiply that answer by the water use for the period in the table. That answer is the water use for the period for your orchard.