



your Lake County HORTICULTURAL NOTES

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OCTOBER 1989

BOTRYTIS BUNCH ROT TREATMENTS

It is the afternoon of September 17 and it has been raining steadily for two days. It is likely bunch rot will affect some percentage of the 1989 crop, especially the white varieties. Problems may be especially severe in dense canopies that prevent fruit from drying off rapidly. Fruit that is cracked from mechanical injury, mildew or measles is also more susceptible to rot.

Since the weekened rains were expected, some growers probably applied a preventive fungicide. How effective the treatment was likely depended on the condition of the grapes going into the storm (see above). It is very important to remember that post-rain treatments should only be applied to possibly PREVENT FUTURE INFECTION, NOT TO ERADICATE EXISTING ONES. Once it has rained and the stage set for infection, treatment may prevent establishment of new but will not kill existing colonies. Should you treat after a rain? The choice is emotional and economic because there is little if any data to show after-the-fact treatment will be beneficial. If you do treat know that you are only doing so in order to slow the spread of rot organisms, not "cure" what is already there.

Current UC recommendations for Botrytis bunch rot are:

TREATMENT:

Pesticide (commercial name)	Amount to Use** (dosage/acre)	P.H.I.+ (days)	Comments
A. BENOMYL 50WP	1-1.5 lb	7	Benomyl-resistant strains occur in some areas.
...PLUS ... CAPTAN 50WP	2 lb		Captan treated grapes prohibited in Canada.
B. IPRODIONE (Rovral) 50WP	1.5-2 lb	0	Do not apply more than 4 times per season.
C. CAPTAN 50WP	2 lb	0	Captan treated grapes prohibited in Canada.

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CHART - continued

D. MANEB (Dithane M-45)	1.5-4 lb	7	Cannot be applied after fruit set.
E. DCNA (Botran) 6 Dust	30 lb	1	

* Preharvest interval. Do not apply within this many days of harvest.
 * Permit required from county agricultural commissioner for purchase or use.
 * Acceptable for organically grown produce.
 ** Apply with enough water to provide complete coverage.

UC IPM Pest Management Database

Beside Botrytis cinerea, other summer bunch rots infect berries when sugars exceed 8%. According to UC plant pathologists, fungicides are ineffective on these. Management is based on reducing injury to the fruit, thereby preventing invasion by rot organisms, e.g. Aspergillus, Alternaria, Cladosporium, Rhizopus etc.

A year like this should be further incentive for growers to re-evaluate their canopy management and other cultural practices (see September Hort Notes), but in the end, Mother Nature is in charge. For a review of the biology and infection cycle of Botrytis cineria and other bunch rots, see (available from our office):

Grape Pest Management
UC Publ. #4105 - \$25.00

Grape Pest Management Guidelines
UCPMG Publication 13 August 1989 - \$1.60

WALNUT HUSK FLY UPDATE

TRAP CATCHES - Numbers were relatively low this season. Growers began calling in mid-August concerned they would be "burned" if they failed to treat, even though very few or no flies had been caught. Due to the lack of long-residual materials, i.e. ethion, I encouraged people to wait for significant catches, which occurred (according to our traps) the third week of August.

NO. OF ADULT HUSK FLIES 1989*

LOCATION

DATE

	8/14	8/17	8/23	8/25	8/29	9/1	9/5	9/7
Lucerne/Nice	2	4	18	15	25	9	22	9
Upper Lake	5	1	2	0	1	0	0	0
Big Valley Road	1	0	0	0	0	0	1	0
Soda Bay Road	-	1	0	0	2	0	1	0

*Standard stick yellow AM trap supercharged with ammonium carbonate.

Growers should continue monitoring WHF traps until husk split. I ENCOURAGE ALL GROWERS TO MONITOR THEIR OWN TRAPS!

CHEMICALS - Two of the materials discussed in the September newsletter were withdrawn: Zolone and ethion. Stocks of ethion may be used up; Zolone should be returned to the dealers. The updated UC recommendations for pre egg-hatch use are:

TREATMENT:

Pesticide (commercial name)	Amount to Use** (dosage/acre)	P.H.I.+ (days)	Comments
Before Egg Hatch			
A. NU-LURE BAIT (formerly Staley's Protein Bait #7)	2 qt		Baited sprays are the preferred treatment and are aimed at killing adults before eggs are laid. Nu-Lure bait attracts flies to spray material and enhances control. If significant egg laying has occurred before treatments, however, adequate control will not be attained.
...PLUS...			
1. ETHION* 8EC	2 pt	HS	Apply in 100 gal water/acre by ground or 10 gal/acre by aircraft.
...or...			
2. MALATHION EC (Cythion)	1.5-3 pt	0	Malathion can increase mite problems. Alternate row spraying is adequate with bait.
NOTE: The following two treatments require more pesticide than baited sprays for equal effectiveness and are more disruptive to parasites and predators.			
B. ETHION* 8EC	2.5 pt	HS	Apply in 100 gal water/acre by ground or 10 gal/acre by aircraft.
C. MALATHION EC (Cythion)	3-4 pt	0	Malathion can increase mite problems.

CHART - continued

- * Acceptable for organically grown produce.
- * Permit required from county agricultural commissioner for purchase or use.
- + Preharvest interval. Do not apply within this many days of harvest.
- ** For dilute application use with 300 to 600 gal water per acre; for concentrate application use at least 20 gal water per acre.
- HS Do not apply after husk split.

UC IPM Pest Management Database

In addition to malathion, Dow's Lorsban 50W is registered for WHF. It apparently has similar residual and efficacy as Zolone. I am interested in hearing how well it worked, especially with bait.

The updated Walnut Pest Management Guidelines, UCPMG Publ. #3 is available from our office for \$1.00.

REMINDER! ORDER YOUR PEAR PEST MANAGEMENT GUIDELINES

In the September issue of Hort Notes, an order form for the new guidelines was included on the last page below my name. I strongly encourage ALL GROWERS to order a copy of these because you NEED IT! In case you have discarded the newsletter, the form is again attached at the end of this issue.

OTHER NEW PUBLICATIONS (contact our office)

Walnut Hedgerow Planting System
UCDANR Leaflet #21467
July 1989 - \$1.50

Walnut hedgerow planting is a system in which trees are planted more closely in the row than is standard practice and trained to produce a continual wall of foliage and fruit-producing shoots. The wall, not the single tree, becomes the management unit in the orchard. Orchard operations such as harvesting, spraying and pruning are conducted along the hedgerow, which is a permanent planting system, that is, it is not designed with the intent to remove any of the trees as the orchard reaches maturity.

Irrigation Scheduling: A Guide for
Efficient On-farm Water Management
UC DANR Publ. #21454 80 pp.
1989 - \$6.00

The purpose of this publication is to provide information on various irrigation scheduling techniques in current use or under evaluation for future use. It pro-

vides a basic understanding of the soil, water, plant, atmospheric and operational factors involved in scientific irrigation scheduling, as well as practical considerations in establishing an on-farm water management program

The Resource Guide to California Agricultural Irrigation Services: Incentives, Special Loans and Technical Assistance

Available from: QEI, Inc.
1623 5th St., Suite C
Davis, CA 95616

(800) 922-6006

OCTOBER CHECKLIST

Cover Crops - Plant by the end of the month in order to make sufficient growth by the time it gets really cold.

COVER CROP SUMMARY TABLE *

COVER CROP	USE	PLANTING DATE	NITROGEN-FIXING RATE (lbs/acre)	GROWTH HABIT
Lana woolypod vetch <i>Vicia dasycarpa</i>	winter annual	fall	30-60	low and viny
Purple vetch <i>Vicia benghalensis</i>	winter annual	fall	30-60	low and viny
Berseem clover <i>Trifolium alexandrinum</i>	winter annual	early fall	20	low and bushy
Austrian winter peas <i>Pisum sativum</i>	winter annual	fall	80-120	low and viny
Bell beans <i>Vicia faba</i>	winter annual	fall	100-200	stiff-stemmed and tall
Cowpeas <i>Vigna sinensis</i>	summer annual	spring-summer	30	low and viny
Sesbania <i>Sesbania bipinosa</i>	summer annual	spring-summer	10	stiff-stemmed and tall
Crotalaria <i>Crotalaria juncea</i>	summer annual	spring-summer	10	stiff-stemmed and tall
Subclover <i>Trifolium subterraneum</i>	orchard winter annual	fall	15	prostrate
Medics <i>Medicago spp.</i>	orchard winter annuals	fall	10	prostrate
Ladino colver <i>Trifolium repens</i>	perennial	fall or spring	5	low and bushy

OCTOBER CHECKLIST (continued)

*from "Legume Cover Crops for Northern California", Small Farm News, July/August 1988.

Vineyard Pre-plant - Contact me for a copy of Preplanting Decisions in Establishing a Vineyard by San Joaquin Farm Advisor Emeritus, Jim Kissler.

Prevent Walnut Shaker Damage

San Joaquin Farm Advisor, Joe Grant, offers thes suggestions to prevent tree damage from shakers:

- *first and foremost, a conscientious, well-trained and experienced shaker operator;
- *sufficient drying off of trees prior to harvest;
- *correct shaker head pressure adjustment;
- *pattern suited to the crop and tree size;
- *frequent, regular checks of machine condition during harvest;
- *regular checking, rotating and servicing of shaker pads;
- *slings greased once per hour, check regularly for wear.

Zinc Deficiency Correction For Pears

36% zinc sulfate, 10 lbs. per 100 gallons water, 150 gpa should be applied at leaf fall. Remember, no oil within 30 days (November 1988 Hort Notes).

1989 WALNUT HARVEST

The trees and the crop look the best yet in the two years I've been in Lake County. With a little help from Mother Nature and a good market situation (no pasta wars!), 1989 should bring some economic relief. Happy harvest to you all.



Growing Grapes with Reduced Inputs

This course offers current information on reducing petrochemical use in grape production. Faculty members, Cooperative Extension Specialists and Farm Advisors of the University of California, discuss practical issues in low input grape production. Topics include site and variety

considerations for sustainable agriculture; vineyard floor management; non-chemical weed control; nutrition and soil fertility; compost and manures; management of insect, disease, and nematode pests; and the current regulatory framework for agricultural chemicals. The program also includes an open discussion with a panel of northern California growers with experience in producing grapes with reduced inputs. *Presented with the assistance of the University of California Sustainable Agriculture Program.*

Coordinator: James Wolpert, PhD, viticulture Extension specialist, Department of Viticulture and Enology, UCD.

Date and Time: Tuesday, 9 a.m.-4 p.m. / November 14.

Fees: \$35 (includes course materials & lunch).

Location: Champagne Room, El Rancho Tropicana, 2200 Santa Rosa Avenue, Santa Rosa. (Call our office 263-2281)

Please _____ mail me a copy of Pear Pest Management Guidelines.
Enclosed is \$2.20 (pay to Pat Johns, County Director)

_____ reserve me a copy of Pear Pest Management Guidelines.
I will pick it up at the UCCE office.

NAME _____

ADDRESS _____

Return to: ATTN: Rachel Elkins
UC Cooperative Extension
883 Lakeport Blvd.
Lakeport, CA 95453

Sincerely,

Rachel

Rachel Elkins
Farm Advisor