

would be an excellent program for maximizing frost protection. After budbreak and during the critical frost-danger period, running the drip system periodically to thoroughly wet as much soil as possible down the driplines may be beneficial. This maximizes the amount of soil moisture available for storing daytime heat energy. ■

## PHOMOPSIS REARS ITS UGLY HEAD AGAIN



Hopefully the coming season does not have the weather related problems experienced by growers during the 1998 season. One problem especially noted is the extensive damage caused by Phomopsis Cane and Leaf Spot on highly susceptible varieties such as Thompson seedless, Grenache, Tokay, Flame and Red Globe. Below are the results of the experimental trial conducted by Paul Verdegaal (San Joaquin County Viticulture Advisor) and myself in Manteca on Grenache. UTC was the untreated control to provide the level of disease without any treatments. All rates are formulated material per acre except treatment 2 which was applied at 3.2 oz per gal. of water.

### Dormant treatments:

Treatments 2-6 were delayed dormant treatments to find materials which would be effective against the disease before bud break. While two treatments were successful, it must be pointed out that both would be very costly and are not registered at these rates for dormant applications for control of Phomopsis. Our search continues this year.

### Foliar treatments:

Treatments number 7 through 24 are foliar treatments which were applied 4 times - each application before significant rainfall occurred. In retrospect, one of the applications probably could have been omitted for the longer lasting materials.

Any treatment which has a small 'j' after the amount of disease were the best treatments in controlling the disease on the leaves. A small 'e' indicates the best of the treatments in controlling the shoot symptoms. As shoot symptoms appear to be the most devastating part of this disease the following discussion is based on shoot symptoms.

Treatments 7-10 are three of the new strobilurin materials. Abound<sup>®</sup> and Sovran<sup>®</sup> performed equally as well. Flint<sup>®</sup>, at the 2 oz rate, was not as effective and will be retested this year at 3 oz.

Treatments 11-18 include several forms of copper materials with and without sulfur and all performed efficiently. Treatment 18, Mancocide, is a combination of mancozeb and Kocide<sup>®</sup> and it also performed very well. Treatments 20-22 were Ziram<sup>®</sup> alone, Ziram alternating with Abound, and a tank mix of both. All three treatments worked well. As both Abound and Ziram performed equally well alone there is obviously no need to tank mix the treatments. Treatment 23, Dithane M-45 (mancozeb) also performed well as did Sulforix, treatment 24.

This trial demonstrated there are many materials which can and will prevent Phomopsis when applied to foliage before rainfall occurs. The important fact to remember is that none of these materials have substantial control after infection occurs. As rainfall is needed for disease spread and development on the young shoots, and if you have a small acreage, the ideal time to apply any material is just before rainfall occurs. Realizing that such is not always possible, waiting as long as possible to obtain maximum growth before treatment will provide better coverage of the foliage when rain does occur. As the vine grows two things happen. 1) A canopy of 15" shoot growth helps provide protection from the splashing effects of the rain and, 2) older tissue is not as susceptible. Hence, applications past this stage are not as cost effective as earlier applications.

If you have any questions about this trial or about Phomopsis control, please contact me.

1998

MANTECA VINEYARD

leaves. shoot

	RATE/ACRE		SECTOR
D O R M A N T	1. UTC		1.95 a 1.62 ab
	2. BENLATE	3.2 oz/gal	1.75 abc 0.93 de
	3. TOPSIN	1.5 lb	1.84 abc 1.40 abc
	4. LIME SULFUR	10 gal	1.88 ab 1.43 abc
	5. LIME SULFUR	30 gal	1.70 abcd 0.95 de
	6. NUCOP	2 lb	1.94 a 1.67 a
F O L I A R  A P P L I C A T I O N	7. ABOUND + LATRON B1956	9.8 oz 0.06 % v/v	0.84 j 0.84 e
	8. ABOUND + LATRON B1956	12.3 oz .06 % v/v	1.17 fghij 0.93 de
	9. SOVRAN + LATRON B1956	.25 lb .06 % v/v	1.54 abcdef 1.07 cde
	10. FLINT	2 oz	1.35 cdefgh 1.33 abcd
	11. NUCOP	2 lb	1.39 cdefgh 1.22 bcde
	12. NUCOP + MICROTHIOL	2 lb 5 lb	1.39 cdefgh 1.19 bcde
	13. CHAMP 2 + MICROTHIOL	2.67 pt 5 lb	1.25 efgh 0.85 e
	14. CHAMP DF	3 lb	1.47 bdefg 0.94 de
	15. CHAMP DF + MICROTHIOL	1 lb 5 lb	1.18 fghij 0.85 e
	16. CHAMP DF + MICROTHIOL	3 lb 5 lb	1.353 cdefghi 1.10 cde
	17. KOCIDE 2000	1.5 lb	1.29 defghi 0.82 e
	18. KOCIDE 2000 + MICROTHIOL	1.5 lb + 5 lb	1.59 abcdef 1.05 cde
	19. MANKOCIDE	2.5 lb	1.36 cdefghi 0.97 de
	20. ZIRAM	4 lb	1.17 fghij 0.93 de
	21. ZIRAM B. ABOUND	3 lb 11 oz	1.09 ghij 0.87 e
	22. ZIRAM + ABOUND	3 lb 15.2 oz	0.95 ij 0.90 de
	23. DITHANE + LATRON B1956	2.5 lb 0.03 % v/v	0.99 hij 0.82 e
	24. SULFORIX	2 qt	1.64 abcde 1.15 cde



Sincerely,

George Leavitt  
Farm Advisor

Any individual requiring special accommodations should contact the advisor in advance.

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