



The Grapeleaf

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*Grape Grower/PCA
Monthly Meeting
Wed. April 17, 2002
12:00 Noon*

*Wed. May 15, 2002
12:00 Noon*

**MEETING
ANNOUNCEMENTS
AND EVENTS IN
THE AREA**

*Winegrape Pest
Management
Alliance free
Seminar and Field
Day
CSUF
)*

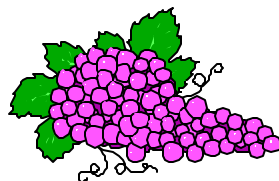
MADERA GRAPE GROWER/PCA MONTHLY MEETING

The Grape Grower/PCA meeting for April will be held on **Wednesday, April 17, 2002** (third Wednesday of each month). Everyone is invited to attend whether or not you are a Madera county resident. One hour of PCA/PA/CCA credit will be available. These meetings are held monthly from November through June and discontinued July through October.

- WHERE:** *The Old School House
23505 Avenue 14
Madera, CA (northeast corner of Avenue 14 and
Road 23½)*
- DATE:** *Wednesday, April 17, 2002 (third Wednesday of the
month)*
- TIME:** *12:00 noon*

Lunch will be available at noon with the meeting starting immediately after serving Petrucci's lunch a cost of \$8.50. If you don't want the lunch you are still invited to come and participate in the meeting. **Please call 675-7879 Ext. 201 if you are planning to attend so we can get a preliminary lunch count.**

SPEAKER: *Joe Browde, Project Coordinator of the
California Winegrape Pest Management
Alliance since August 2000. He will address the
topic of "Sulfur Stewardship: Our role in
preserving and judiciously using this important
vineyard tool"*



Sincerely,

George Leavitt
Farm Advisor

POWDERY MILDEW - IT'S BACK!!!

The Powdery mildew model has begun and as of this writing is at 100 in Madera

The disease: The fungus which causes grape powdery mildew (*Uncinula necator*) is probably the most common disease on grapes. It is an obligate parasite, which means it must grow on grape tissue and will not parasitize any other species of plants. Some grape varieties, (Rubired , Grey Riesling, Royalty) are highly resistant to the disease. However, on those varieties which are highly susceptible to this disease, (Carignane, Chardonnay, Cabernet Sauvignon, Fiesta), it can stunt growth, defoliate leaves, delay color, and greatly reduce the quality and quantity of the crop. Thompson Seedless, Chenin blanc, Barbera, and Zinfandel are moderately susceptible to this disease.

The amount of disease which occurs depends on the time of infection and weather favorable for its development. Mildew of grapes has sexual and asexual life cycles. The sexual cycle offers mildew a new genetic combination which may play a significant role in resistance development to the chemicals used for control. In the central San Joaquin Valley it appears that the sexual stage does not play a role in disease initiation, hence treatments aimed at the overwintering stage are not recommended. Both sexual and asexual cycles can initiate disease, but it is the asexual cycle which offers the disease a rapid method of propagation. Under highly favorable conditions powdery mildew can go from spore to producing spores in as little as 5-6 days. While this cycle can be very devastating, it can also be very easily controlled.

Powdery mildew is very dependant on temperature and careful monitoring of the temperature can

determine when control measures are necessary. Last year (2001) the weather was very hot during May and June, hence the mildew pressure was one of the lightest in several years.

Using the Powdery Mildew index is the best way to save money and materials in controlling this annual disease in vineyards. We skipped two sprays in our mildew plot last year using this model.

The Mildew Disease Index: The grape powdery mildew index is calculated by adding 20 each time there are at least 6 continuous hours during the day with canopy temperatures between 70 and 85° F. If there are less than 6 hours in that range or if the maximum daily temperature is greater than 95° F in the canopy, then 10 is subtracted from the index. The total index never goes above 100 or below zero. The spray interval is doubled when the index is zero, lengthened when it is between 10-30, normal at 40-50, and shortened when it is 60 or over. A short interval for sulfur is 6 days while 10-14 days could be the longer interval. By using this index, growers can apply materials on a timely and more effective manner and get better control. An example is provided at the end of this article. In heavy pressure seasons the grower may apply more material, but will gain better control. The real advantage of this index will be during periods of low pressure when spray intervals can be safely lengthened or spray applications eliminated thereby saving you, the grower, time and money as well as reducing chemical applications. Do not go more than three weeks without a sulfur application during low pressure times. The key to using this index is careful monitoring of the temperature in the vineyard.

Temperature monitoring devices are available from a number of suppliers and can provide the information needed for disease assessment. Some of these can be read in the field while other systems can be purchased which can download up to 50 recording devices via radio telemetry to a base station computer. The secret to controlling grape powdery mildew is timing. Remember, the disease will continue while you are watering, on vacation, sick or when your applicator is broken. Apply the control measures on time or you will have powdery mildew.

Sources of information: There are several sources, both private and public, which are available to find out what the mildew index is near your location. One source of information is readily available through Sun-Maid (897-6225), can be accessed by phone and is available to the public. Anyone can call to receive updated information about vineyard pests and disease and hear a recorded message. This recorded message will give general data over the area where the University of California Fresno Grape Network is located.

If you want more specific information, you may call one of the four stations currently working located closest to your vineyard and hear the data direct from the computer. This is a computer generated message you must listen closely to hear the information. It will say “the temperature, dew point, relative humidity, minimum and maximum temperature for today and the previous day”, then it will say “Time 70 to 85 degrees for the previous day is x.x” This is the number of hours for the powdery mildew model to calculate the mildew index. After this it will give Degree day for the station, precipitation for the day and previous day. Press # to repeat the message or * to disconnect. Use the number of hours between 70-85 to determine if you add 20 or subtract 10 from the mildew index. The drawback of calling these machines direct is that they do not accumulate the mildew index for you. You must access it on a daily basis and keep track of the index yourself.

The advantage is that you will know what the index is specifically for the station closest to your vineyard. The station locations and direct telephone numbers are:

Ripperdan	662-8879
Del Rey	888-7023
Easton	834-3125
Kerman	846-4269

The best way to access UC Fresno Grape Network is on the internet.

<http://www.ipm.ucdavis.edu/DISEASE/wxpestcastretrieve.html> On the Research Weather Database page click on the Fresno County Grape Network. A new page comes up showing 9 different stations. Reedley North, Reedley West, Jamison, Sanger and Fowler are currently being moved to new locations. Ripperdan, Aliso (Madera County 6 miles west of Firebaugh) Kerman, Easton and Del Rey are functional and working. Click on Daily (not hourly) for the station you want. Another page will appear with that station shown. You then need to enter a time frame - For now start with March 25, 2002 until present. Just below the date is Select Daily interval variables - The All Variables option is automatically selected. Simply click on “All Variables” to deselect that option and then click on “Temperature Threshold Hours”. Scroll to the bottom of the page and click on “Retrieve Data”. Three columns appear for hours under 32 F, 70-85 F, and >95 F. Use these numbers to calculate the mildew index for the station you have selected. Any Questions - Call Me... 559-675-7879 Extension 206.

POWDERY MILDEW DISEASE INDEX

The Grape Powdery Mildew Disease Index is calculated by adding 20 each time there are least 6 continuous hours during the day when temperatures are between 70 and 85^o F. If there are less than 6 hours or if the maximum temperature in the canopy that day is greater than 95^o F , then 10 is subtracted from the index. The disease index never exceeds 100 or goes below 0.

Example:

Day 1	7 hours between 70 & 85	20
2	6 hours	40
3	6 hours	60***
4	5 hours	50
5	5 ½ hours	40
6	5 hours	30
7	4 hours	20
8	3 hours	10
9	5 hours	0
10	7 hours	20
11	6 ½ hours	40
12	8 hours	60***
13	6 hours	80
14	5 ½ hours	70
15	7 hours	90
16	8 hours	100
17	5 hours	90
18	4 hours	80
19	5 hours	70
20	6 hours	90
21	7 hours	100
22	9 hours, max temp 98 ^o F	90
23	8 hours	100
24	7 hours	100
25	8 hours	100
26	9 hours	100

*** Warning level - possible start of mildew.

When disease risk index is 0, spray interval is doubled.

When it is 10- 30, spray interval is lengthened.

At 40-50 the interval is normal

When the index is 60 or more, spray interval is short.

A short interval for dust is 7 days. A longer interval is 10 days. Never go more than 3 weeks.