FINGER LAKES VINEYARD NOTES
NEWSLETTER '97 #5  May 22, 1997

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CURRENT SITUATION

Tim Martinson

By all accounts, it has been a cool spring so far. Cool weather has delayed bud break substantially. In vineyards I have examined, most varieties haven't progressed much beyond one-inch shoot growth, and some are still at late bud swell or bud burst. Degree-day accumulations in Geneva are at 72, as of May 21 - well below the 6-year average (1991-1996) of 177 for this date. Last year, at this time, we were about in the same boat - bud break was delayed by 1 to 2 weeks, and degree-day accumulations were below average. While the cool weather is causing some immediate concern, it is likely that grape development will 'catch up' as the weather gets warmer.

Given the lag in development, and the cool, humid weather, it seems timely to again emphasize the importance of early-season disease control. As a result of the disease pressure last year, expect high levels of disease inoculum to be present in your vineyard. This increases the importance of the early season sprays, and leaves less of a margin for error. As is often stressed, good coverage is important - and becoming increasingly so as partial resistance of powdery mildew to SI
fungicides appears. For detailed information about disease control options, I refer you to the article in last month's vineyard notes (#4) by Wayne Wilcox.

**EARLY SEASON INSECTS: BANDED GRAPE BUG AND GRAPE PLUME MOTH**

Tim Martinson

Two early season pests - grape plume moth and banded grape bug, have been the focus of recent research by Dr. Greg English-Loeb's and myself. Both complete their development between bud-break and bloom, but the amount of damage they cause and the need and proper timing for controlling them differs.

**Banded Grape Bug (BGB).** BGB is an insect with sucking mouthparts (like a mosquito) that feeds by inserting its mouthparts into tissue and extracting liquids from them. Eggs, which are present on dormant canes and trunks, hatch shortly after budbreak (3-5 in shoot growth) and begin feeding on shoot tips. As clusters emerge, BGB nymphs (immatures) begin feeding on them - mainly on the pedicels (stalks) of individual florets and on the rachis. They complete development after about 3 weeks - after which adults no longer feed on grapes, but rather start feeding on other insects. So what damage does this do to the cluster? A lot. In our initial 1995 study, we caged BGB on individual shoots, and found that the number of florets per cluster was reduced before bloom by 30%, berries per cluster (after fruit set) was reduced by 50%, berry weight was reduced by about 10%, and the final weight of injured clusters was 60% less than that of uninjured clusters. More to the point, in 1996 we did a commercial scale trial, in which we measured yield of sprayed (late May) and unsprayed vines in a vineyard section with about 20 BGB per vine. Total yield of unsprayed vines was 2.4 T/acre less than sprayed vines, and harvest counts showed about 30 fewer clusters per vine, and about 10% fewer berries per cluster. On a per-bug basis, we calculated that each BGB nymph was responsible for destroying about 0.4 lb of grapes - or about 0.1 T/acre if they were evenly distributed throughout the vineyard.

The good news is that we believe this insect is much more common in the Lake Erie region than in the Finger Lakes. To date, we have observed BGB in the Finger Lakes mainly in wild grapes. However, the severity of the damage means that it is worthwhile to examine your vineyards early to see if this insect is present. At about 5 to 10 inches shoot growth, look for this insect on developing clusters. Its most prominent feature is the antennae - which have alternating white and black segments (which is why it is called the banded grape bug). Start looking at the vineyard borders, as it appears to be most common there, and often is present only in border areas. If you see more than one or two per vine, you may want to apply an insecticide spray to the block. The NY DEC has granted a 2-EE recommendation for using carbaryl (Sevin) to control this insect - details are in vineyard notes #4. The proper time to spray for this pest is between 3-5 in shoot growth and early June. If you delay application for BGB until after that time, don't bother - the injury will have already occurred by then. More detailed information about this pest has been published in Grape Research News (Vol. 8, no. 2, summer 1997). Copies are available through our office.

**Grape Plume Moth.** Plume moth is the other insect that is active between budbreak and bloom. It is one that is highly visible and often noticed when webbed leaves and shoot tips are seen in the vineyard. Generally, this insect completes its development by early June, and
spends the rest of the year as in the egg stage in crevices under bark on second-year wood. Unlike BGB, this insect has chewing mouthparts, and feeds on leaves, shoot tips and sometimes on clusters. Although more visible than BGB, our studies indicate that it does much less damage. In a survey of 24 Finger Lakes vineyards last year, we found: 1) Shoot infestations ranged from 5 to 40% (average - 15%); 2) Border areas (3 rows or 2 panels from edge) had double the amount of plume moth as vineyard interiors; 3) Plume moth fed mostly on individual leaves. Of the shoots infested, 70% showed feeding injury only on lateral leaves, 20% had feeding on the shoot tips, and 10% showed feeding including cluster injury. Shoot length was reduced only on shoots where the growing tip was fed upon. Berry counts on cluster-injured shoots indicated that even cluster feeding did not appear to reduce berry number much. The bottom line is that, unless you have extremely heavy infestations of this pest, you are not likely to risk much crop by not treating for it - or to gain much by spraying for it. In vineyards with a history of plume moth, it may be worthwhile to apply an insecticide at about 1-3 in shoot growth (i.e. now). The worst time to spray is after you have noticed webbed leaves in your vineyard. Most likely your spray will not reach its target, and often the larvae will have pupated and be done for the year by the time you notice the webbing. Adults are active and laying eggs from bloom to a few weeks after bloom, so including an insecticide in the immediate postbloom spray may reduce infestations the following year. Again, unless you have high infestations in your vineyard, you are unlikely to see much benefit. We will be continuing evaluations of plume moth injury this growing season.

FOLIAR BORON SPRAYS

Phil Throop & Tim Martinson

Many vineyards in the Finger Lakes showed symptoms of boron deficiency or low petiole test values during 1996. In a newsletter article last fall, Dave Peterson recommended fall soil applications of Solubor to provide time for vines to uptake some prior to bloom this season. Boron is important for ovule development, pollen tube growth, and fruit set. If you had set problems last year and/or low levels in your petiole analysis, you may want to consider an early foliar boron application, again to allow time before bloom for uptake to occur. Petiole sufficiency levels are from 25-50 ppm. Guidelines included with petiole analysis reports recommend foliar sprays of Solubor (2.5 lb per acre, containing 0.5 lb actual boron) at 10-14 days before bloom and at the beginning of bloom for boron levels <25 ppm. However, you may want to consider earlier application if petiole tests indicated <25 ppm boron. Dr. Warren Stiles indicated that it may be beneficial to apply 0.5 lb actual boron (2.5 lb Solubor) at the 2 to 5 inch shoot growth stage and again at pre-bloom. If petiole analysis is in the 25 to 35 ppm range, make one application prebloom.

LOOKING FOR VINEYARDS WITH GRAPE SET PROBLEMS

Dr. Warren Stiles, Professor of Pomology in fruit nutrition, is seeking out vineyard sites that had fruit set problems last year as part of a project evaluating nutritional factors affecting berry set and yield in grapes. Those of you who attended the Pest Management Field Day heard Dr. Stiles talk about foliar nutrition, and received a questionnaire. Dr. Stiles and his graduate student Jose Saenz would like to collect samples from 3 - 5 vineyards at 3-5 in. shoot growth (soon) to run nutritional
analyses. If you have a block that had berry set problems last year, please contact our office at 315-536-5134, by the end of next week and your vineyard may be included in this study. We will be glad to share results with you.

NY GRAPE GROWERS MAY SEE TAX RELIEF STARTING IN 1997

Barry Shaffer

In 1997, New York taxpayers who derive more than two-thirds of their Federal gross income from farm operations may claim full credit for the school property taxes they paid on 100 acres or less of land used in agricultural production. In 1998, the eligible acres will increase up to 175. In 1999, the eligible acres will increase up to 250. Farmers are also entitled to claim State reimbursement for 50 percent of the amount of school taxes they paid on acreage over the allowable base. Growers will still have to pay the school property taxes, then receive reimbursement from New York State in the form of a new income tax credit. The residence of the farmer does not qualify. There is an income limitation which applies if the farmer’s New York adjusted gross income exceeds $100,000 for the taxable year. This limitation scales back the credit to zero over the income range of $100,000 through $150,000. In other words, the credit will reduce to zero after $150,000. If the farmer is a corporation, entire net income rather than New York adjusted gross income is used.

One problem for many grape growers, is that they may not qualify with the two-thirds total household gross sales/income from agriculture. If you’re close to qualifying, you should look at adjusting your operation to take advantage of this tax break.

CODE-A-PHONE IS BACK!

The Finger Lakes Grape Program Code-A-Phone will be back in operation as of 4:30 PM Tuesday May 27 (Monday is Memorial Day Holiday). If you have not used the Code-A-Phone in the past, it is a recorded message that gives updates on the pest situation, important stages of development and critical timings of sprays, fertilizer applications, upcoming meetings of interest, and more. I will update the message 2-3 times per week through June, and at least once per week through the rest of the season.

To use the Code-A-Phone, simply call the Finger Lakes Grape Program office at (315) 536-5134 between the hours of 4:30 PM and 8:00 AM on Monday through Friday, and all weekend long. You may also leave a message with any questions or comments that you might have. If you do not wish to listen to the whole message, but would like to leave a message, press the * button on your phone at any point during the recorded message, and it will skip to the end of the message, and you will then be able to leave a message.

If you have questions or comments about the Code-A-Phone, please contact our office. Please note that the message is NOT available during our regular office hours.

CURRENT EVENTS

July 9-10, 1997. Riesling Symposium. The Corning Radisson in Corning, NY. In conjunction with the annual meeting of the American Society for Enology & Viticulture/Eastern Section, a 1.5 day symposium will be offered on the viticultural effects and enological processes on Riesling wines. Topics include environmental requirements for growing Riesling, rootstocks and clones, viticultural effects on character of
the fruit, winemaking variations, tastings, late-
harvest and ice wines, Riesling-like varieties,
regional styles, as well as a Riesling theme
luncheon. For more information, contact Dr.
Thomas Henick-Kling, Dept. Food Science &
Technology, NYSAES, Geneva, NY 14456-
0462. Phone: 315-787-2227; Fax: 315-787-
2284; E-mail: th12@cornell.edu

July 10-11, 1997. The 22nd Annual Meeting
of the American Society for Enology &
Viticulture/Eastern Section. The Corning
Radisson in Corning, NY. The annual meeting
(1.5 days) will be preceded at the same
location by the pre-conference Riesling
Symposium (1.5 days). The program includes
research presentations on viticulture and
enology from universities and industry, student
paper and scholarship awards, trade show,
wine reception, a luncheon featuring Riesling
wines, and an evening banquet featuring an
awards ceremony and sparkling wine tasting.
For registration or exhibitor information
contact Dr. Charles Edson, 11 Agriculture
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MI 48824-1039. Phone 517-353-5134; Fax:
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