



## Cold Climate Grape IPM News

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**Stage of Berry Growth:** Pea-size to berry-touch observed last week in the Champlain Valley.



**Review of Key Times to Scout and Manage Diseases and Insects:** You have seen this chart before but it does not hurt to review what diseases and insects should be of concern as we go through the growing season. The chart was developed by Drs. Schilder and Isaacs at Michigan St. University and can be found on the web at:

<http://grapes.msu.edu/calendar.htm>

| Vine growth stage  | Bud swell | 1-5" shoot | 8-12" shoot | Pre-bloom | Bloom | Pea-sized | Berry touch | Bunch closing | Veraison | Pre-harvest | Harvest | Post-harvest |
|--------------------|-----------|------------|-------------|-----------|-------|-----------|-------------|---------------|----------|-------------|---------|--------------|
| <b>Insects</b>     |           |            |             |           |       |           |             |               |          |             |         |              |
| Cutworm            | +         | +          |             |           |       |           |             |               |          |             |         |              |
| Rose chafer        |           |            |             | +         | +     | +         |             |               |          |             |         |              |
| Grape berry moth   |           |            |             | +         | +     | +         | +           | +             | +        | +           | +       | +            |
| Grape leafhopper   |           |            |             | +         | +     |           | +           | +             | +        | +           | +       |              |
| Potato leafhopper  |           |            | +           | +         | +     |           | +           | +             | +        |             |         |              |
| Japanese beetle    |           |            |             |           |       |           |             | +             | +        | +           |         |              |
| <b>Diseases</b>    |           |            |             |           |       |           |             |               |          |             |         |              |
| Phomopsis          |           | +          | +           | +         | +     | +         | +           | +             | +        | +           | +       |              |
| Black rot          |           | +          | +           | +         | +     | +         | +           | +             | +        |             |         |              |
| Downy mildew       |           | +          | +           | +         | +     | +         | +           | +             | +        | +           | +       | +            |
| Powdery mildew     |           | +          | +           | +         | +     | +         | +           | +             | +        | +           | +       | +            |
| Botrytis bunch rot |           |            |             |           | +     |           |             | +             | +        | +           | +       |              |

- Usual time for monitoring and control.
- Lesser risk, but monitoring and control may still be required.
- +** Potential period of insect activity or disease infection risk

Developed by A. Schilder and R. Isaacs  
Michigan State University

As you can see from the chart, it is still an important time to manage the Big 4 Diseases — Phomopsis, black rot, downy mildew and powdery mildew. It is too early to let your guard down particularly this year because of the high potential for infection that we have had. Below are some pictures taken on July 7th in a non-sprayed vineyard in the Champlain Valley. Black rot and downy mildew symptoms were severe depending on the grape cultivar. In contrast, powdery mildew symptoms were not evident on vines observed — hopefully, that will continue. Actually, free water in the form of rain is detrimental to the survival of powdery mildew conidia. But, this means that during a stretch of dry but humid conditions, powdery mildew infections can take place and cultivars highly susceptible to powdery mildew should be protected. The bottom line — continue to protect your vines with fungicides. Please refer to the [May 23 issue](#) of this newsletter for a table which rates the relative effectiveness of various fungicides for the Big 4 Diseases.

### Downy Mildew



### Black Rot



## Arthropod Management:

**Grape Berry Moth:** If your vineyard is considered at “high risk” for grape berry moth, an insecticide to manage this insect was warranted at ten days post-bloom. If you did not apply an insecticide at that time, you should evaluate your vineyard for grape berry moth damage during the 3rd week in July. The following table is from the publication:

[“Risk Assessment of Grape Berry Moth and Guidelines for Management of the Eastern Grape Leafhopper”](#)

The publication also outlines how to monitor your vineyard. For your convenience, a scouting form can be downloaded at:

<http://nysipm.cornell.edu/publications/grapeman/files/mothform.pdf>

The “treatment threshold” is 6% damaged clusters during the 3rd week of July, i.e., an insecticide is warranted. Insecticide options and important details concerning those options can be found in the [2006 New York and Pennsylvania Pest Management Guidelines for Grapes](#).

Table 3. Management Procedures for Grape Berry Moth and Eastern Grape Leaf hopper.

| GBM risk category | Recommended Sampling Times and Treatment Thresholds |                        |  |                     | Recommended Time to Spray <sup>2</sup>                    |                          |
|-------------------|---|------------------------|--|---------------------|---|--------------------------|
|                   | Grape Berry Moth                                    |                        | Eastern Grape Leaf hopper <sup>3</sup> |                     | Grape Berry Moth  | Eastern Grape Leafhopper |
|                   | Sampling  | Threshold <sup>1</sup> | Sampling                               | Threshold           |   |                          |
| High risk         | •4th week of August                                 | •15% damaged clusters  | •4th week of August                    | •10 per leaf        | •Ten days post bloom<br>•Early August<br>•BOS Late August | BOS Late August          |
| Intermediate risk | •3rd week of July                                   | •6% damaged clusters   | •3rd week of July                      | •5 per leaf         | •10 days post-bloom<br>•BOS Early August                  | •BOS Early August        |
|                   |   |                        | •4th week of August                    | •10 per leaf        |   | •BOS late August         |
| Low risk          | •3rd week of July                                   | •6% damaged clusters   | •10 days post-bloom                    | •Stippling + adults | •BOS Early August   | •BOS 10 days post-bloom  |
|                   |   |                        | •3rd week of July                      | •5 per leaf         |   | •BOS Early August        |
|                   |   |                        | •4th week of August                    | •10 per leaf        |   | •BOS Late August         |

<sup>1</sup> An insecticide treatment is recommended if damage levels exceed the stated threshold. Consult Cornell Pest Management Recommendations for selection of appropriate insecticide.

<sup>2</sup> BOS = Based On Sampling. BOS sprays are those made only when the results of sampling confirm that damage exceeds the stated threshold. Sampling often will demonstrate that a BOS treatment is not needed.

**Leafhoppers** - The 3rd week in July is also the time to monitor your vineyard for leafhoppers. The same publication listed on the previous page outlines a method for scouting. Note that the “treatment threshold” is an average of 5 leafhoppers per leaf. For your convenience, a scouting form is available for downloading at:

<http://nysipm.cornell.edu/publications/grapeman/files/hpprform.pdf>

**Immature Leafhopper** (below) and **stippling** (right) observed last week.



## **Contact Information**

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