

## **Reexamination of Grape Berry Moth Management Practices in the Lake Erie Region**

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### **Introduction**

The Grape Berry Moth Risk Assessment (GBM RA) protocol was developed ten years ago by Hoffman and Dennehy (1987) to address the possibility of reducing the number of insecticide applications necessary to manage grape berry moth damage to economically acceptable levels. This program was initiated by the processors' desire to reduce pesticides due to public concern and the growers' desires to reduce production costs. The GBM RA protocol calls for a 10-day post bloom spray in high and intermediate risk vineyards. Low and intermediate risk vineyards are then scouted the third week of July to determine if an insecticide application is necessary during the first week of August. In high risk vineyards an early August insecticide application is made without sampling. Sampling during the fourth week of August is used in high risk vineyards to determine if a third insecticide application in late August is required.

Despite wide implementation of the Grape Berry Moth Risk Assessment protocol across the Lake Erie region, late season damage from the second and third generation of GBM has not been accurately predicted. This late season damage has become a concern for 'Concord' growers in the Lake Erie region over the last three growing seasons.

For GBM RA to successfully manage GBM damage, the vineyard must be scouted at the correct time, in relation to the life cycle of grape berry moth and the generation peaks in population. The current model predicts peak egg deposition as 8 days after peak trap catches. Sprays should be timed to target the times of peak egg deposition. Currently, a growing degree day model is used to predict when each generation will emerge and peak. The third week in July and the fourth week of August were determined by Hoffman to represent the second and third generation peaks. However this model has not been proven reliable in the prediction of the second and third generation. Collecting data on GBM emergence, generation peak and damage and correlating this with corresponding growing degree days allows for a re-evaluation of the growing degree day model.

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