

**Words of Wisdom on Grape Disease Management**  
**By Dr. Turner Sutton on 20 April 2006**  
(Plant Pathologist at North Carolina State University)

The (Spectrum) WatchDog models, at least as we are using them (placing graphs after the fact on the web) don't have a lot of predictive value but are useful in letting growers know if there have been conditions favorable for infection and alerts them to be diligent in their spray program if similar conditions favorable for infection are predicted.

Each model needs to be considered in the context of the susceptibility of the fruit and foliage to the pathogens. Here are just a few thoughts/guidelines.

**The risk for BLACK ROT** is greatest from just before bloom until about 6 weeks after bloom. So if the risk is >1 during this time period then there is a pretty good likelihood that infections could occur. About 6 weeks after bloom the fruit become resistant.

**First infections of DOWNY MILDEW** usually occur when there is 5-10 inches of shoot growth and foliar infections can occur through the summer and into the fall. However there is a more distinct period of fruit susceptibility. **They are most susceptible from about 2 weeks before bloom until 4 weeks after bloom.** This is the critical time to protect the fruit. I've been surprised about how much leaf infection we see in NC during the summer resulting in significant defoliation. So the model should give an idea of when leaf infections have occurred during the summer. Since the phosphorus acid products are primarily eradicants, after model predictions of infections would be a good time to use them. I don't have any experience with this approach but am going to look at it at Childress vineyard this year.

**In vineyards with a problem, POWDERY MILDEW infections** can occur soon after bud break, but in most vineyards the threat isn't great until a week or 2 before bloom. The most important sprays for pm on the fruit are from bloom to about 1 month after bloom on vinifera.

**Other than for diagnostic purposes I wouldn't take any chances during the period from 1-2 weeks before bloom until 4-6 weeks after bloom and follow a good protectant program regardless the model predictions.** I don't think we have enough data/experience to do otherwise. These are your most important sprays for early season disease control.

**In NC I've always recommended 4 BOTRYTIS sprays,** one a bloom, closing, veraison and preharvest. Work in NY has shown that the bloom spray is not always critical, some years it helps, others it doesn't. Bloom might be a very good place to use the botrytis model. If conditions aren't favorable then you could probably omit the spray safely. I'd be more cautious with the spray at closing and just include a botrytis spray at veraison and preharvest.

Turner Sutton