2006 Grape Disease Potential at Purdy, MO

**Black Rot**: risk 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. Risk > 1 indicates protectant spray needed to prevent **infection on 31 May to 6, 12 and 25 June 11, 28 July, 5, 8 11, 22, 24, 27-28 August when leaf wetness > 6 hrs** (black arrows indicate spray timing – assumes 10 day activity of spray)

**Botrytis**: NC recommends 4 sprays, one at bloom, closing, veraison and preharvest. Bloom spray may not be needed in AR which may be supported by 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. **Risk > 1 occurred only on 27 August.**
Downy Mildew: First infections usually occur when there is 5-10 inches of shoot growth and foliar infections can occur through the summer and into the fall. Vines are most susceptible from about 2 weeks before bloom until 4 weeks after bloom. 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. Risk > 2 indicated high risk of infection on 7, 12, 17, 22-23 June, 10-12, 14, 28 July, 3, 8, 11, 15, 22-23, 27-28 August (black arrows indicate spray timing – assumes 10 day activity of each spray)

Powdery Mildew: Infections can occur soon after bud break. The most important sprays must protect fruit a week or 2 before bloom to about 1 month after bloom on vinifera. The model requires 3 consecutive days with at least 6 hours between 70-86°F to trigger the conidial index which increases 20 points each day with at least 6 hours between 70-86°F. Index decreases 10 points each day with less than 6 hours between 70-86°F or any day with a minimum temperature above 95°C. Conidial index > 60 (blue horizontal line below) means pathogen will be producing conidia in 5 days. Needed powdery mildew fungicide protectant last half of both June and July and all of August (black arrows indicate spray – assumes 10 day activity of each spray). Index of 0-30 indicates pathogen is functioning minimally and reproductive rate is every 15 days or not at all. Ignore the red points indicating ascospore severity.
Graph of leaf wetness and percent relative humidity at Purdy, MO.