Note From Mike Ellis – Dormant Applications of Fungicides on Grapes

For the past two years we have been conducting evaluations of dormant applications of Liquid lime sulfur and fixed copper (copper hydroxide-COCS) for control of Phomopsis cane and leaf spot on grape. We applied lime sulfur at 10 gallons per acre and copper at 3 lb per acre in 100 gallons of water per acre. We made applications in the fall (after leaf drop), in the spring at bud swell, and at both times (spring and fall).

Our results indicate that both lime sulfur and copper applied in the spring resulted in a significant reduction of Phomopsis leaf and internode infection in the growing season. Lime sulfur was more effective than copper. There were no differences in disease control between the spring only and both the spring and fall applications. Although we got a significant level of disease control, we never achieved 100% control of Phomopsis with the dormant application. Therefore, the dormant application did not reduce the need for fungicide applications for Phomopsis control during the season.

We have been getting a lot of questions about the use of dormant applications of fungicides, so I will make the following comments at this time:

1. Dormant applications of lime sulfur or copper will provide some degree of Phomopsis control, but will not reduce the need for the standard recommended fungicide sprays for Phomopsis control during the growing season. We have no evidence to indicate that the dormant applications are effective against any of the other grape diseases.

   In short, they could help, but if you have a good spray program during the growing season, they probably will not result in much of an increase in disease control at the end of the season. Please remember that this assumes you have a good fungicide spray program during the season. We will be presenting the results of our studies with an economic analysis after this season. The bottom line is that if you have a good spray program and your vineyards are pretty clean, you probably do not need a dormant application of fungicide in the spring.
   I do not recommend a dormant application of fungicide in the fall for disease control.

2. I do recommend the use of dormant applications of lime sulfur in the following situations:
   A. In organic vineyards, this should be an important spray.
   B. In vineyards where Phomopsis is getting out of hand, this spray should be considered . In some Concord vineyards that are mechanically pruned, Phomopsis incidence is increasing. A dormant spray of lime sulfur would probably be beneficial here, but the economics on Concord needs to be considered.
      For wine grape vineyards where the level of Phomopsis infection is severe, the dormant spray should be considered. It has been my observation over the past several years that we can detect some level of Phomopsis in almost every vineyard we inspect. It is probably not realistic

to expect 100% control of Phomopsis on internodes even with a good full-season spray program (this is my personal opinion , Mike Ellis). In our studies, the dormant application of lime sulfur plus a good full season spray program has never resulted in 100% control of Phomopsis.

C. If anthracnose is present in the vineyard, a dormant application of lime sulfur at the rate of 10 gallons per acre is very important. This spray is the major means of controlling anthracnose. We have seen serious anthracnose in several Ohio vineyards, mainly on Vidal and Reliance grapes.

In summary, a dormant application of lime sulfur (lime sulfur appears to be more effective than copper) is beneficial and even necessary in some situations as mentioned above; however, it is not a "silver bullet" that is going to reduce the need for a full-season fungicide spray program on wine grapes.

If you have questions, please contact me (Mike Ellis) at 330-263-3849 or ellis.7@osu.edu.