Subject: Re: Grape Notes, Vol. 11, No. 5, June 10, 2016
From: Sonia Schloemann <umassfruit@umass.edu>
Date: 7/14/16, 12:31 PM
To: umassfruit@umass.edu

Good Morning,
Please find below an excellent discussion of Botrytis management from Alice Wise at Cornell Coop Extension of Suffolk County.

~ Sonia Schloemann

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CENTER FOR AGRICULTURE

Botrytis Control in Grapes

Alice Wise and Wayne Wilcox, Cornell Univ.

For a complete discussion of Botrytis, see Wayne Wilcox's 2016 grape disease overview, posted at
http://ccesuffolk.org/agriculture/grape-program/current-events-in-the-vineyard.

From Wilcox: 'All of the current "standard" fungicides registered for Botrytis control provided excellent protective activity on the surface of the berries. That's why they got developed and marketed in the first place. The fungicides Vangard, Scala and Elevate also provided very good protective activity within the berries. This was anticipated since such fungicides are known to be absorbed by plant tissues, but Elevate was long sold as a surface protectant. However, this was a function of marketing strategy rather than science.'

Briefly, the fungicide options:

1. **Rovral**: Due to resistance in years past, Rovral should not be the workhorse of your program. However, if you've been giving it a rest, it may be a useful when used on a limited basis. The use of an adjuvant improves control. Stylet Oil (assuming proximity to sulfur sprays is not an issue) is a good choice.
2. **Vangard**: Vangard is absorbed into the berries, so it's rainfast and has limited postinfection activity. There doesn't seem to be any data showing improved performance by adding an adjuvant. Vangard is highly prone to resistance development, so its use should be strictly minimized. The label allows a maximum of two applications per season, but keep it to a single spray each year unless you really get into a bind.
3. **Scala**: Same chemistry and mode of action as Vangard, the two have performed similarly in a limited number of head-to-head tests.
4. **Elevate**: Unrelated to any other on the market. There is a resistance risk, not as significant as that for Vangard. The label allows a maximum of three applications

per season, but European guidelines recommend just one, in rotation with unrelated materials.

5. **Flint**: Provides very good to excellent control at 3 oz/A, versus 1.5 to 2 oz for PM. Limit strobie use to a maximum of two applications per season, so if you're already there, this is not an option.
6. **Pristine**: Has provided good control at a rate of 12.5 oz/A in limited testing, and excellent control at 19 oz/A. Both the strobie and non-strobie component of this "combination product" have activity against Botrytis, so there is some resistance-management benefit to using it. Still not a preferred option if you've already used it or another strobie product twice earlier in the season. Has some activity against non-Botrytis cluster rot organisms such as bitter rot.
7. **Oxidate**: Oxidate is formulated to stay on the outside of the waxy cuticle covering leaves and berries. In trials on Chardonnay at LIHREC, it burned out Botrytis sporulation. However, since the fungus is established in the flesh of the berry, new sporulation reappeared within a week. The temporary reduction in sporulation may help to reduce the spread of spores, particularly if repeat applications are used. Use of Oxidate in combination with or in addition to botrycides may be a better strategy but it is still unclear if the addition of Oxidate will enhance control. Oxidate 2.0 is OMRI approved.
8. **Double Nickel**: AI is *Bacillus amyloliquefaciens* strain D747, a proprietary strain of common soil microorganism which produces secondary metabolites harmful to cell walls and membranes of fungi and bacteria. Labeled for Botrytis and sour rot. Wilcox results: in 2015, it did not provide good control of Botrytis bunch rot. OMRI certified.
9. **Fracture** (Blad): AI - Banda de Lupinus albus doce, a polypeptide derived from germinating sweet lupine plants, it breaks down fungal cell walls. Labeled for Botrytis; has a 2ee for suppression of sour rot. Wilcox results: good control of Botrytis bunch rot in 2015; not yet tested for sour rot. Company is reportedly seeking OMRI approval.
10. **Timorex Gold**: The a.i. tea tree oil is a naturally occurring product that is found in various herbs, spices and fruits but is concentrated in the leaves and terminal branches of the tea tree, *Melaleuca alternifolia*. It degrades rapidly through volatilization with 90% gone within 24 hrs so there is no forward protection. The label claims control of Botrytis and sour rot. There has been no testing in NY, proceed with caution.

Final word: Cultural practices (canopy management, leaf pulling, thinning out clumps of clusters, moderate use of nitrogen) are critical components of Botrytis control programs. Botrycides will be minimally effective if cultural practices are not timely and well executed. (***Source****: LI Fruit & Vegetable Update July 14, 2016/3*)

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