

Summary of Grape Bunch Rot Trials from 1989 to 2006.

Jay W. Pscheidt

The combination of susceptible cultivars, thick canopies, and favorable weather for the development of grape bunch rot results in high disease pressure every year at OSU's Botany and Plant Pathology Field Laboratory which is located across the Willamette River from Corvallis, OR. The objective of this report is to summarize, in a simple way, the various grape bunch rot control trials conducted from 1989 to 2006.

Trial results are summarized relative to the nontreated control and expressed on a percentage basis. For example, if the nontreated control had 90% bunch rot and a certain treatment had 10% bunch rot then the percent control would be calculated as $(1 - (10/90)) \times 100 = 89\%$ control. It should be noted that this approach does not focus on rates, timing, weather or other factors highly important for interpretation of the data.

Trials were conducted on Riesling and/or Pinot Noir, both of which are susceptible to bunch rot. All test vines were trained to bilateral cordons with spur pruning. Results have been averaged across cultivars. Unless otherwise stated, leaves were not removed from vines around the fruit zone. All materials were deployed at bloom, bunch close, veraison and/or pre-harvest (1 to 3 weeks before final evaluation).

Several fungicide products and programs have been evaluated including materials used alone (Table 1), materials used in tank mixes or rotation (Table 2) and the non-chemical treatment of leaf removal (Table 3). Numbers in parenthesis indicate the number of trials where the material was significantly different than the non-treated control over the total number of trials.

Some materials were tested only once while others were tested for multiple years. The more times a product was evaluated (or the higher the number of trials) the more confidence one can have in the summary statistic presented. For example, it would be unwise to expect 97% control every time one might use a Vanguard plus Flint tank mix (Table 2).

Incidence and severity data are summarized separately. Unfortunately, there are no statistical comparisons possible between any of these materials given the way this data was summarized. It is not possible to say that 90% control is significantly different from 79% control.

Two or more materials were often rotated during the growing season. This is indicated with a "/" symbol in Table 2, however, there is no indication (in this report) of how often in a trial each material was used, how many times they might have been used or which material was used first. In general, materials were switched with each succeeding application. Products mixed together in the tank and then applied are indicated with a "+" symbol.

Overall, it appears that Elevate and Vanguard have done the best with bunch rot control. Switch is a pre-packaged mix that contains Vanguard. All fungicide programs are enhanced when leaves are removed shortly after bloom (Table 3).

Table 1. Materials Used Alone*.

Material	% Control of Bunch Rot	
	Incidence**	Severity**
Rovral	56 (0/2)	42 (2/6)
Elevate	46 (3/4)	79 (3/4)
Vangard	50 (2/2)	79 (2/2)
Scala	29 (1/1)	71 (1/1)
Switch	52 (2/2)	90 (2/2)
Pristine	36 (5/6)	64 (5/6)
Nu-Cop	23 (0/2)	48 (0/2)
Kaligreen	40 (0/1)	66 (0/1)
Serenade	6 (0/3)	18 (1/3)
Messenger	6 (0/2)	35 (0/2)

* It is not recommended to use any single material for all applications to control grape bunch rot. Use different materials from different chemical classes to help prevent the buildup of resistant fungi.

** Numbers in parenthesis indicate the number of trials where the material was significantly different that the non-treated control over the total number of trials.

Table 2. Materials Used in Tank Mix or Rotation.

Material	% Control of Bunch Rot	
	Incidence*	Severity*
Rovral + Vangard	43 (2/2)	78 (2/2)
Vangard + Flint	91 (1/1)	97 (1/1)
Rovral/Vangard	73 (1/1)	87 (1/1)
Rovral/Pristine	8 (0/1)	15 (0/1)
Elevate/Pristine	6 (0/1)	37 (0/1)
Vangard/Flint	15 (1/2)	50 (1/2)
Vangard/Abound	30 (2/3)	64 (3/3)
Vangard/Switch	16 (1/1)	64 (1/1)
Vangard/Elevate	51 (6/7)	79 (6/7)
Rovral/Elevate/Vangard	13 (1/3)	47 (1/3)

* Numbers in parenthesis indicate the number of trials where the material was significantly different that the non-treated control over the total number of trials.

Table 3. Fungicides and leaf removal for bunch rot control..

Material	% Control of Bunch Rot	
	Incidence*	Severity*
Leaf Removal Only	8 (0/6)	28 (2/9)
Rovral alone	56 (0/2)	42 (2/6)
Rovral and Leaf Removal	39 (3/4)	62 (6/6)
Elevate alone	46 (3/4)	79 (3/4)
Elevate and Leaf Removal	46 (2/4)	78 (4/4)
Vangard	50 (2/2)	79 (2/2)
Vangard and Leaf Removal	83 (2/2)	97 (2/2)
Rovral/Elevate/Vangard	13 (1/3)	47 (1/3)
Rovral/Elevate/Vangard and Leaf Removal	44 (1/2)	69 (1/2)

* Numbers in parenthesis indicate the number of trials where the material was significantly different that the non-treated control over the total number of trials.