

**Efficacy of fungicides for management of powdery mildew on Pinot Noir, 2014.**

Fungicide treatments were arranged in a randomized complete block design in a block of 'Pinot Noir' (on *V. rupestris* x *V. riparia* 101-14 rootstock) planted in 1998 on a 7x8 ft spacing. A single buffer rootstock plant was trained between each set of treatment vines and a buffer rootstock row separated each varietal row. Pinot Noir vines were trained to a Guyot system and pruned on 10 to 11 Mar. Shoot thinning and sucker removal by hand occurred on 19 May. Canes were cut above the top wire on 24 Jun and maintained at this height throughout the growing season. Each treatment was replicated on 4 sets of 5 vines. Treatments were applied approximately every 14 days using a hooded boom sprayer at 150 psi at a rate of 96 or 103 gal/A. Approximately 2.5 or 3 gal of spray suspension was used per 20 vines depending on time of year. Fungicides were applied on 29 May (BBCH 55), 12 Jun (BBCH 65), 26 Jun (BBCH 71), 10 Jul (BBCH 73), 24 Jul (BBCH 77), and 7 Aug (BBCH 81, start of Veraison). No fertilizer was applied this year. No leaves were removed from the fruiting zone. GoalTender (32 fl oz/A) plus Makaze (32 fl oz/A) was applied on 13 Mar and Chateau (5 oz/A) plus Reckon (48 fl oz/A) plus Activator 90 (2 qt/100 gal water) was applied on 2 Apr for management of weeds. According to the Gubler-Thomas powdery mildew forecasting model, there were 7 rain events between bud break and end of bloom that were favorable for ascospore release and infection: 2 severe infection periods (22 Apr and 8 May) and 5 moderate infection periods (21, 24 and 26 Apr, 3 and 18 May). The risk index varied from 0 to 60 during May but shot up past 60 in early Jun, remained high until Jul 12 when it dropped below 60 for a month during an usual hot period, then back above 60 on Aug 14 until the end of Sep. Incidence and severity of powdery mildew on leaves were evaluated on 30 Jul and 18 Aug. Incidence and severity of powdery mildew on clusters were evaluated on 30 Jul and 15 Aug. Powdery mildew disease data was collected by randomly examining 50 leaves or clusters from the middle 3 vines of each replicate.

Although spring growing conditions had normal precipitation with warmer temperatures, the summer was characterized as unusually hot with many days over 90°F. Symptoms of powdery mildew were first found on 2 Jun as individual colonies in nearby blocks. All fungicide treated vines had significantly less powdery mildew on leaves or clusters when compared to nontreated vines. All fungicide treated vines had a low incidence and severity of powdery mildew on leaves and were not significantly different from each other. Lowest incidence of powdery mildew on clusters was found on vines treated with Torino but powdery mildew on vines treated with the high rate of Inspire Super or Aprovia were not significantly different. All fungicide treated vines had a low severity of powdery mildew on clusters and were not significantly different from each other. No phytotoxicity was observed on any treated vines.

Treatment and Rate/A**	% Leaves with Powdery Mildew (18 Aug)*		% Clusters with Powdery Mildew (15 Aug)*	
	Incidence	Severity	Incidence	Severity
Nontreated.....	73.5 a	23.7 a	100 a	93.7 a
Torino at 3.4 fl oz .....	1.5 b	0.0+ b	8.0 c	0.1 b
Inspire Super at 16 fl oz.....	2.0 b	0.0+ b	21.0 b	0.5 b
Inspire Super at 20 fl oz.....	2.0 b	0.0+ b	16.3 bc	0.5 b
Aprovia (A15457K) at 10.5 fl oz...	3.0 b	0.1 b	9.5 c	0.2 b

\* Means followed by the same letter do not differ significantly based on Fisher's protected LSD ( $P=0.05$ ). The data points with 0.0+ indicate the value was very low but not equal to zero.

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