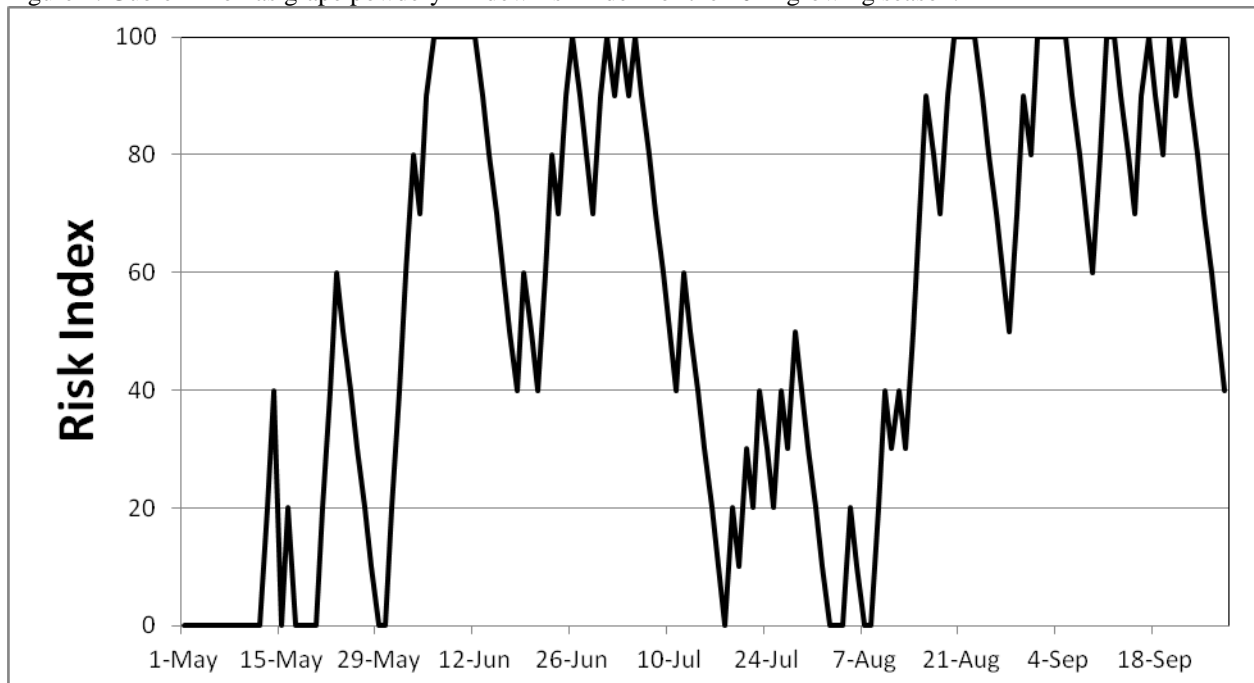


Efficacy of fungicides for management of powdery mildew on Pinot Gris, 2014.

Fungicide treatments were arranged in a randomized complete block design in a block of 'Pinot Gris' (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 Gris vines were trained to a Guyot system and pruned on 14 to 18 Mar. Shoot thinning and sucker removal by hand occurred on 22 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 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), 7 Jul (BBCH 76), 14 Jul (BBCH 78), 21 Jul, 28 Jul (BBCH 79), and 4 Aug (BBCH 80, 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 (Figure 1). Incidence and severity of powdery mildew on leaves were evaluated on 31 Jul and 19 Aug. Incidence and severity of powdery mildew on clusters were evaluated on 31 Jul and 16 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. Vines treated with Kumulus had significantly less powdery mildew on leaves or clusters when compared to nontreated vines except for the incidence of powdery mildew on clusters. The addition of OR-009 with Kumulus resulted in significantly less incidence of powdery mildew on leaves or severity of powdery mildew on clusters. Powdery mildew on vines treated with Cinnerate was not significantly when compared to nontreated vines except for the severity of powdery mildew on leaves. No phytotoxicity was observed on any treated vines.

Figure 1. Gubler-Thomas grape powdery mildew risk index for the 2014 growing season.



Treatment & Rate/A or /100 gal as indicated below **	% Leaves with Powdery Mildew (19 Aug)*		% Clusters with Powdery Mildew (16 Aug)*	
	Incidence	Severity	Incidence	Severity
Nontreated.....	100 a	46.3 a	100	88.8 a
Kumulus at 3 lb	57.5 b	3.3 bc	100	45.6 b
Kumulus at 3 lb plus OR-009 at 32 fl oz/100 gal.....	31.0 c	1.6 c	98.5	12.9 c
Cinnerate at 30 fl oz.....	92.0 a	17.6 b	100	80.6 a

* Means followed by the same letter do not differ significantly based on Fisher's protected LSD ($P=0.05$). Means without letters do not differ significantly ($P=0.05$).

** Fungicides were applied on 29 May (BBCH 55), 12 Jun (BBCH 65), 26 Jun (BBCH 71), 7 Jul (BBCH 76), 14 Jul (BBCH 78), 21 Jul, 28 Jul (BBCH 79), and 4 Aug (BBCH 80, start of Veraison).

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