

Evaluation of fungicide programs for control of summer bunch rot on grapevines, 2022.

Experimental and registered fungicides were tested in various combinations for control of summer bunch rot in a 10-yr-old 'Riesling' vineyard in Clarksburg, CA. Rows were spaced 11 feet apart and vines 5 feet apart. Treatments were applied to run-off using a mist blower backpack sprayer (Stihl SR 450). Treatments were performed in a complete randomized design with five replicates of three vines each. Four sprays were carried out during the growing season: 9 May (bloom), 6 Jun (pre-bunch closure), 14 Jul (veraison), and 5 Aug (pre-harvest). The spray volume was gradually increased from 100 gal/A (bloom) to 150 gal/A (pre-bunch closure, veraison, pre-harvest) as the vines grew to ensure complete coverage. Treatments were evaluated for summer bunch rot incidence and severity on 29 Aug. A total of twenty-five random clusters were evaluated per replicate. Incidence was defined as the proportion of clusters in a plot showing bunch rot. Severity was determined by estimating the percentage of area of a cluster that was infected; the severity value of all clusters was then averaged to give a plot-wide estimate of disease severity. Mean incidence and severity values for each treatment were computed. Trial data was analyzed using the ANOVA and means were compared using Fisher's LSD test ($\alpha=0.05$).

Temperatures were mild and dry throughout the growing season, five precipitation events of 0.01 to 0.13 in. were recorded during the application period. Overall, the disease pressure was high. By the time of evaluations, disease incidence and severity in the untreated control had reached 72.8% and 27.7%, respectively. None of the treatments significantly reduced disease incidence but a significantly reduction in the severity was observed in 11 of the 46 evaluated treatments. A treatment consisting of the experimental biofungicide Mevalone 55 fl oz + Kinetic 0.125% v/v was the most effective treatment controlling grape bunch rot. P18-16 1 oz + Embrace EA 16 fl oz/100 gal was the least effective treatment.

Treatment and rate/A ^x	Application time ^y	Grape Bunch rot ^z	
		Incidence, %	Severity, %
Mevalone 55 fl oz + Kinetic 0.125% v/v	9 May, 6 Jun, 14 Jul, 5 Aug	44.0 n.s.	7.4 a
ASFBI0F01-02 48 oz + Activator-90 16 fl oz	9 May	48.0	10.5 ab
Switch-62.5 WD 14 oz /	6 Jun		
Pristine 23 oz /	14 Jul		
Elevate 50 WDG 16 oz	5 Aug		
ASFBI0F01-02 48 oz	9 May	38.4	11.6 a-c
Pristine 23 oz	6 Jun		
Elevate 50 WDG 16 oz	14 Jul, 5 Aug		
Mevalone 55 fl oz + Kinetic 0.125% v/v	9 May, 14 Jul	45.6	12.3 a-d
Luna Experience 8.5 fl oz	6 Jun, 5 Aug		
ASFBI0F01-02 48 oz + Activator-90 16 fl oz	9 May, 6 Jun, 14 Jul, 5 Aug	33.6	12.4 a-e
AGS-FunThyme 0.5% v/v + Dyn-Amic 0.1% v/v	9 May, 6 Jun, 14 Jul	47.2	13.1 a-f
ASFBI0F01-02 48 oz	9 May, 6 Jun, 14 Jul, 5 Aug	50.4	13.7 a-f
ASFBI0F01-02 48 oz	9 May	56.8	13.7 a-g
Switch-62.5 WD 14 oz	6 Jun		
Pristine 23 oz	14 Jul		
Elevate 50 WDG 16 oz	5 Aug		
Luna Tranquility 14 oz + Syl-Coat 4 oz/100 gal	9 May, 6 Jun, 14 Jul	52.8	14.6 a-g
Scala 18 oz + Syl-Coat 4 oz/100 gal	5 Aug		
OR-491 50 fl oz/100 gal + OR-009E 32 fl oz/100	9 May, 6 Jun, 14 Jul, 5 Aug	47.2	14.7 a-h
Pristine 23 oz	6 Jun	57.6	14.8 a-i
Elevate 50 WDG 16 oz	14 Jul, 5 Aug		
OR-009E 32 fl oz/100 gal	9 May, 6 Jun, 14 Jul, 5 Aug	50.4	15.2 a-j
OxiDate 5.0 1% v/v + Kinetic 0.125% v/v	9 May, 6 Jun, 14 Jul, 5 Aug	44.8	15.5 a-k
Luna Experience 8.5 fl oz /	9 May	52.8	16.1 a-l
Pristine 23 oz	6 Jun		
OxiDate 5.0 1% v/v + Kinetic 0.125% v/v	14 Jul, 5 Aug		
Mevalone 55 fl oz + Kinetic 0.125% v/v	9 May, 14 Jul	54.4	16.4 a-l
Elevate 50WDG 1 lb	6 Jun, 5 Aug		
Howler 2.5 lb + Theia 1.5 lb + Kinetic 0.125% v/v	9 May, 6 Jun, 14 Jul, 5 Aug	52.7	16.5 a-l
Berezi at 5 lb/A.	9 May, 6 Jun, 14 Jul	49.6	17 a-l
ASFBI0F01-02 48 oz + Activator-90 16 fl oz	9 May	50.4	17.1 a-l
Pristine 23 oz	6 Jun		
Elevate 50 WDG 16 oz	14 Jul, 5 Aug		
SA-0650004 28 fl oz	9 May, 6 Jun, 14 Jul, 5 Aug	52.0	17.5 a-l
Berezi at 3 lb/A.	9 May, 6 Jun, 14 Jul	52.0	17.7 a-l
NSA 1% v/v + Nordox 4 oz/100 gal + Silco 1 qt/100 gal	9 May	62.4	17.7 a-l
NSA 1% v/v + Potum 2.5 lb/100 gal + Silco 1 qt/100 gal	6 Jun, 5 Aug		
NSA 1% v/v + Nordox 4 oz/100 gal + Potum 5 lb/100 gal	14 Jul		
JMS Stylet-Oil 1% v/v	9 May, 6 Jun, 14 Jul, 5 Aug	48.8	17.8 a-l

BTS EXP 100 20.5 fl oz + Kinetic 0.05%v/v	9 May, 6 Jun, 14 Jul, 5 Aug	57.6	18.2 b-l
AGS-Fun 2 0.5%v/v + Dyn-Amic 0.1%v/v	9 May, 6 Jun, 14 Jul	53.6	19 c-m
Luna Experience 8.6 oz + Syl-Coat 4 oz/100 gal	9 May	65.6	19.7 c-m
Scala 18 oz + Syl-Coat 4 oz/100 gal	6 Jun, 5 Aug		
Serenade ASO 4 qt + Syl-Coat 4 oz/100 gal	14 Jul		
OR-488 40 fl oz/100 gal + OR-097A 32 fl oz/100 gal	9 May, 6 Jun, 14 Jul, 5 Aug	56.8	20.1 c-m
LALSTOP-G46 3.5oz + LALSTIM-OSMO 4.5oz	9 May, 6 Jun, 14 Jul, 5 Aug	62.4	20.3 c-m
Switch 62.5WG 14 oz	9 May	60.0	20.3 c-m
Pristine 23 oz	6 Jun		
Elevate 50 WDG 16 oz	14 Jul, 5 Aug		
Boost Biomes BC18 70 oz	9 May, 6 Jun, 14 Jul, 5 Aug	58.4	20.4 c-m
NSA 1% v/v + Nordox 4 oz/100 gal + Silco 1 qt/100 gal	9 May	56.8	20.9 d-m
NSA1% v/v + Sulfur dry flowable 3 lb + Silco 1 qt/100 gal	6 Jun		
NSA 1% v/v + Nordox 4 oz/100 gal + Potum 5 lb/100 gal	14 Jul		
NSA 1% v/v + Potum 2.5 lb/100 gal + Silco 1 qt/100 gal	5 Aug		
NSA 1% v/v + Potum 5 lb/100 gal + Sulfur dry flowable 3 lb + Silco 2 qt/100 gal	9 May, 6 Jun, 14 Jul, 5 Aug	68.0	20.9 d-m
Howler 5 lb + Kinetic 0.125%v/v	9 May, 6 Jun, 14 Jul, 5 Aug	59.2	21.2 d-m
Luna Experience 8.5 fl oz	9 May	57.6	21.3 d-m
Pristine 23 oz	6 Jun		
BTS 100 20.5 fl oz + Kinetic 0.05%v/v	14 Jul, 5 Aug		
Esendo 2.8 lb + Kinetic 0.125%v/v	9 May, 6 Jun, 14 Jul, 5 Aug	56.0	21.4 e-m
microSURE (Agriwash) 4.36 gal	9 May, 6 Jun, 14 Jul, 5 Aug	57.6	23.1 f-m
P18-16 2 oz + Embrace EA 16 fl oz/100 gal	9 May, 6 Jun, 14 Jul, 5 Aug	53.6	23.6 f-m
X7N68-R007 16 fl oz	9 May, 6 Jun, 14 Jul, 5 Aug	63.2	24.2 g-m
Luna Experience 8.5 fl oz	9 May	62.4	25.3 g-m
Pristine 23 oz	6 Jun		
BTS 100 27.4 fl oz + Kinetic 0.05%v/v	14 Jul		
Theia 3 lb + Kinetic 0.125%v/v	9 May, 6 Jun, 14 Jul, 5 Aug	62.4	25.6 g-m
OR-009E 48 fl oz/100 gal	9 May, 6 Jun, 14 Jul, 5 Aug	62.4	25.9 h-m
NSA 1.4% v/v	9 May, 6 Jun, 14 Jul, 5 Aug	61.6	26.7 i-m
X7N68-R007 16 fl oz + Dyne-Amic 0.125%v/v	9 May, 6 Jun, 14 Jul, 5 Aug	64.0	26.8 j-m
Untreated Control	-	63.2	27.7 j-m
NSA 1% + Potum 5 lb/100 gal + Nordox 8 oz/100 gal	9 May, 6 Jun, 14 Jul, 5 Aug	72.8	27.8 j-m
BTS EXP 100 27.4 fl oz + Kinetic 0.05% v/v	9 May, 6 Jun, 14 Jul, 5 Aug	68.0	29.1 k-m
CS-2005 32 oz	9 May, 6 Jun, 14 Jul, 5 Aug	63.2	31.1 lm
P18-16 1 oz + Embrace EA 16 fl oz/100 gal	9 May, 6 Jun, 14 Jul, 5 Aug	67.2	31.5 m

^x Products with a '+' sign in between indicates a tank mix

^y Fungicide application times were bloom = 9 May, pre-bunch closure = 6 Jun, veraison = 14 Jul, pre-harvest = 5 Aug. Trial was evaluated on 29 Aug

^z Means followed by the same letter within a column are not significantly different according to Fisher's LSD with $\alpha=0.05$.

n.s.= not significant