GRAPE (*Vitis vinifera* 'Riesling')
Summer bunch rot; *Botrytis cinerea, Aspergillus sp., Rhizopus*

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Evaluation of fungicide programs for control of summer bunch rot on grapevines, 2021.

Experimental and registered fungicides were tested in various combinations for control of summer bunch rot in a 9- yrs-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. Three sprays were carried out during the growing season: 12 May (bloom), 11 Jun (pre-bunch closure), and 21 Jul (veraison). The spray volume was gradually increased from 100 gal/A (bloom) to 150 gal/A (pre-bunch closure, veraison) as the vines grew to ensure complete coverage. Treatments were evaluated for summer bunch rot incidence and severity on 16 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 (α=0.05).

Temperatures were mild and dry throughout the growing season; one precipitation event of 0.03 in. was recorded on 25 Apr. Overall; the disease pressure was low. By the time of evaluations, disease incidence and severity in the untreated control had reached 44% and 7.3%, respectively. All treatments showed a significant reduction in disease incidence and severity compared to the untreated control, except for Serenade ASO 4 qt, which was the least effective treatment. A program consisting of the experimental biofungicide Mevalone 55 fl oz alternated with the synthetic fungicide Pristine 23 oz was the most effective treatment controlling grape bunch rot, although most other treatments were not statistically different between each other.

Treatment and rate/A[z]	Application date	Grape Bunch rot [y]	
		Incidence, %	Severity, %
Mevalone 55 fl oz + Kinetic 0.125 % v/v Pristine 23 oz + Kinetic 0.125 % v/v Mevalone 55 fl oz + Kinetic 0.125 % v/v	12 May 11 Jun 21 Jul	5.6 a	0.3 a
EXP14 3 lb + Embrace-EA 32 fl oz	12 May, 11 Jun, 21 Jul	6.4 a	0.4 a
NSTKI-014 3 lb	12 May, 11 Jun, 21 Jul	8.8 ab	1.0 abc
Vangard 10 oz + Syl-Coat 0.125% Miravis Prime 13.4 oz + Syl-Coat 0.125%	12 May 11 Jun, 21 Jul	8.8 ab	0.6 ab
Theira 4 fl oz + Syl-Coat 0.125% v/v Luna Experience 8.6 fl oz	12 May, 21 Jul 11 Jun	9.6 ab	1.7 abcde
Elevate 1 lb + Vacciplant 16 oz Luna Experience 8.6 oz + Vacciplant 16 oz Elevate 1 lb + Vacciplant 16 oz	12 May 11 Jun 21 Jul	9.6 ab	0.6 ab
EXP14 3 lb + Syl-Coat 4 fl oz	12 May, 11 Jun, 21 Jul	10.4 ab	1.1 abc
Miravis Prime 13.4 oz + Syl-Coat 0.125% Switch 14 oz + Syl-Coat 0.125% Vangard 10 oz + Syl-Coat 0.125%	12 May 11 Jun 21 Jul	10.4 ab	0.4 ab
Elevate 16 oz Pristine 23 oz	12 May, 21 Jul 11 Jun	10.4 ab	0.7 abc
Luna Experience 8.6 fl oz Pristine 23 oz Elevate 16oz	12 May 11 Jun 21 Jul	11.2 ab	0.9 abc
Elevate 1 lb Luna Experience 8.6 fl oz	12 May, 21 Jul 11 Jun	12.0 ab	1.6 abcde
BTS-EXP-100 27.4 fl oz + Kinetic 0.05% v/v	12 May, 11 Jun, 21 Jul	13.6 ab	1.3 abcd
Luna Experience 8.6 oz + Syl-Coat 4 oz Scala 18 oz + Syl-Coat 4 oz	12 May 11 Jun, 21 Jul	13.6 ab	1.0 abc
NSTKI-014 5 lb	12 May, 11 Jun, 21 Jul	13.6 ab	1.1 abc
JMS Stylet 1% v/v	12 May, 11 Jun, 21 Jul	15.2 abc	3.0 abcdef
Boost Biomes BC18 5^13 CFU/acre	12 May, 11 Jun, 21 Jul	15.2 abc	1.4 abcd
Agricell BioFub 128 floz + Dynamic 0.125 % v/v	12 May, 11 Jun, 21 Jul	16.0 abc	1.5 abcd
Luna Experience 8.6 oz + Syl-Coat 4 oz Vanguard 10 oz + Syl-Coat 4 oz	12 May 11 Jun, 21 Jul	16.0 abc	1.1 abc
Mevalone 55 fl oz + Kinetic Adj 0.125% v/v Elevate 16 oz + Kinetic Adj 0.125% v/v	12 May, 21 Jul 11 Jun	16.0 abc	1.8 abcde
Parade 3.1 fl oz + Dyne-Amic 0.25% v/v	12 May, 11 Jun, 21 Jul	16.0 abc	2.8 abcdef
Luna Experience 8.6 oz PHD 6.2 oz Elevate 1 lb	12 May 11 Jun 21 Jul	16.8 abc	1.6 abcde
MinerAll 8.5 lb	12 May, 11 Jun, 21 Jul	16.8 abc	2.0 abcde
Nanospada 3.3 gal/100 gal	12 May, 11 Jun, 21 Jul	16.8 abc	2.0 abcde

Luna Experience 8.6 oz BS-200 27.4 fl oz Pristine 23 oz	12 May 11 Jun 21 Jul	17.6 abc	2.5 abcdef
Mevalone 55 fl oz + Kinetic Adj 0.125 %v/v	12 May, 11 Jun, 21 Jul	17.6 abc	2.3 abcde
Howler 5fl oz + Syl-Coat 0.125% v/v Luna Experience 8.6 fl oz	12 May, 21 Jul 11 Jun	18.4 abc	2.1 abcde
CS-2005 20 oz	12 May, 11 Jun, 21 Jul	18.4 abc	4.1 def
NSTKI-014 7 lb	12 May, 11 Jun, 21 Jul	18.4 abc	1.2 abc
microSURE™ 4.36 gal	12 May, 11 Jun, 21 Jul	20.8 bc	3.2 bcdef
Product-G 3.5 oz + Adjuvat O 4.5 oz	12 May, 11 Jun, 21 Jul	20.8 bc	3.5 cdef
EXP14 3 lb + Glacier EA 16 fl oz	12 May, 11 Jun, 21 Jul	20.8 bc	2.9 abcdef
BTS-EXP-100 27.4 fl oz	12 May, 11 Jun, 21 Jul	21.6 bc	3.5 cdef
Vacciplant 16 oz	12 May, 11 Jun, 21 Jul	22.4 bc	4.3 ef
Esendo 2.8 fl oz+ Syl-Coat 0.125% v/v Luna Experience 8.6 fl oz	12 May, 21 Jul 11 Jun	28.8 cd	2.5 abcdef
Serenade ASO 4 qt	12 May, 11 Jun, 21 Jul	38.4 ce	5.1 fg
Untreated Control	Not Applicable	44.0 e	7.3 g
LSD		13.7	2.8

[z] Fungicide application dates were bloom =12 May, pre-bunch closure =11 Jun, and veraison =21 Jul

[y] Means followed by the same letter within a column are not significantly different according to Fisher's Protected LSD at $\alpha = 0.05$.