

SCENARIO 1

You are evaluating a spray program your premium 10-acre *Vitis vinifera* 'Cabernet Sauvignon' vineyard located in Napa Valley, CA. Your vineyard is 15 years old, in premium production at 3 tons/acre. Unfortunately, you had a crop-loss this year due to powdery mildew, and you are trying to figure out where things went wrong.

Phenology: Budbreak: April 15; Bloom: June 1; Véraison start: August 10; Harvest: October 15.

Weather: A reprieve from drought occurred with early-spring rains, but these rains and cooler, cloudy weather delayed the growing season a bit. The summer was cooler than normal, which continued the delay in vine development. The only heat spike came right at the end of August, when temperatures soared into the triple digits for a few days.

Spray Program:

Date	Product	Rate per acre	Water volume
20-Apr	JMS Stylet Oil	2%	50 gal
30-Apr	JMS Stylet Oil	2%	50 gal
10-May	Procure 480 SC Microthiol Disperss	8.0 fl oz 4.0 lbs	50 gal
24-May	Vivando	15.4 fl oz	50 gal
7-Jun	Pristine	12.5 oz	75 gal
21-Jun	Luna Experience	6.0 fl oz	75 gal
7-Jul	Quintec Microthiol Disperss	6.6 fl oz 4.0 lbs	75 gal
21-Jul	Flint Extra Microthiol Disperss	3.5 fl oz 2.0 lbs	75 gal
5-Aug	Torino JMS Stylet Oil	6.8 oz 0.5%	75 gal

Weather:

	Week 1					Week 2					Week 3					Week 4					Week 5					
	Av. T _{min} °F	Av. T _{max} °F	Av. RH (%)	Precip (inch)	Days w/ Precip	Av. T _{min} °F	Av. T _{max} °F	Av. RH (%)	Precip (inch)	Days w/ Precip	Av. T _{min} °F	Av. T _{max} °F	Av. RH (%)	Precip (inch)	Days w/ Precip	Av. T _{min} °F	Av. T _{max} °F	Av. RH (%)	Precip (inch)	Days w/ Precip	Av. T _{min} °F	Av. T _{max} °F	Av. RH (%)	Precip (inch)	Days w/ Precip	
Jan	37	54	94	0.3	3	42	58	93	1.1	6	44	55	90	5.2	7	43	52	91	1.6	5						
Feb	43	61	88	1.7	5	41	61	87	0.6	4	43	65	88	0.2	5	41	59	84	1.7	7						
Mar	40	62	84	1.5	2	36	61	78	0.5	3	39	74	68	0	0	40	69	82	0.1	2	40	62	80	0.5	4	
Apr	37	66	75	0.5	2	43	65	79	1.4	2	42	72	75	0	2	41	70	70	0.1	2						
May	42	76	59	0	0	43	68	79	0.2	3	51	63	85	0	0	42	68	74	0	0						
Jun	55	77	75	0	0	53	79	64	0	0	48	80	73	0	0	49	75	77	0	0	47	84	67	0	0	
Jul	52	77	75	0	0	55	76	79	0	0	50	75	78	0	0	50	75	77	0	0						
Aug	50	73	82	0	0	52	71	83	0	0	50	78	77	0	0	48	86	64	0	0						
Sept	46	86	66	0	0	45	87	62	0	0	48	76	79	0	0	47	82	68	0	0	49	88	64	0	0.0	
Oct	50	71	76	0	0	45	86	58	0	0	47	66	86	1	4	47	66	80	1.2	4						

Spray Coverage:

You had calibrated your over-the-row multi-head fan sprayer at the start of the season and re-calibrated every time you changed your gallons-per-acre delivery. Each year, you do a general mid-season (bloom) coverage check using water sensitive paper, located throughout the canopy (upper canopy, lower canopy, exterior to the canopy and interior to the canopy).

