

SCENARIO 3

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 1; Bloom: May 15; Véraison start: July 25; Harvest: September 25.

Weather: Spring was warm and dry, with an earlier-than normal budbreak. These pleasant conditions continued through bloom, followed by a late June heat spike. After that, weather remained optimal for vine growth and development, and the vintage proceeded into late summer and early fall warm and dry conditions.

Spray Program:

Date	Product	Rate per acre	Water volume
10-Apr	JMS Stylet Oil	2%	50 gal
20-Apr	JMS Stylet Oil	2%	50 gal
30-Apr	Vivando	15.4 fl oz	50 gal
14-May	Flint Extra Microthiol Disperss	3.5 fl oz 4.0 lbs	50 gal
28-May	Quintec Microthiol Disperss	6.6 fl oz 4.0 lbs	75 gal
14-Jun	Torino JMS Stylet Oil	6.8 oz 0.5%	75 gal
25-Jul	Vivando	15.4 fl oz	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	31	54	83	0.1	2	25	57	68	0	0	36	61	80	0.2	2	31	60	74	0	0					
Feb	34	59	80	0.1	1	32	66	72	0	0	32	61	74	0.2	1	34	66	60	0	0					
Mar	35	61	78	0.2	2	37	72	76	0	0	38	66	71	0.3	2	35	65	78	0.1	1					
Apr	48	67	87	1	3	42	74	65	0.1	1	39	73	52	0	0	43	86	56	0	0					
May	44	85	53	0	0	49	69	77	0	0	43	75	69	0	0	44	86	51	0	0	47	77	67	0	0
Jun	50	77	74	0	0	47	77	65	0	0	45	81	62	0	0	57	81	77	0	0					
Jul	56	83	70	0	0	49	78	74	0	0	47	75	78	0	0	53	80	73	0	0	49	74	77	0	0
Aug	54	75	77	0	0	50	78	79	0	0	54	82	73	0	0	53	85	71	0	0					
Sept	50	86	65	0	0	48	87	67	0	0	45	81	70	0	0	44	78	59	0	0					
Oct	45	76	55	0	0	40	83	46	0	0	37	79	52	0	0	37	71	81	0	0	35	68	74	0	0

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).

