



Economics of Early Blight Control in the Semi-Arid Environment of the Pacific Northwest US

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In southern Idaho, fungicides programs are designed to manage:

- Early blight/brown spot
- White mold
- Late blight
- (Gray mold and black dot)

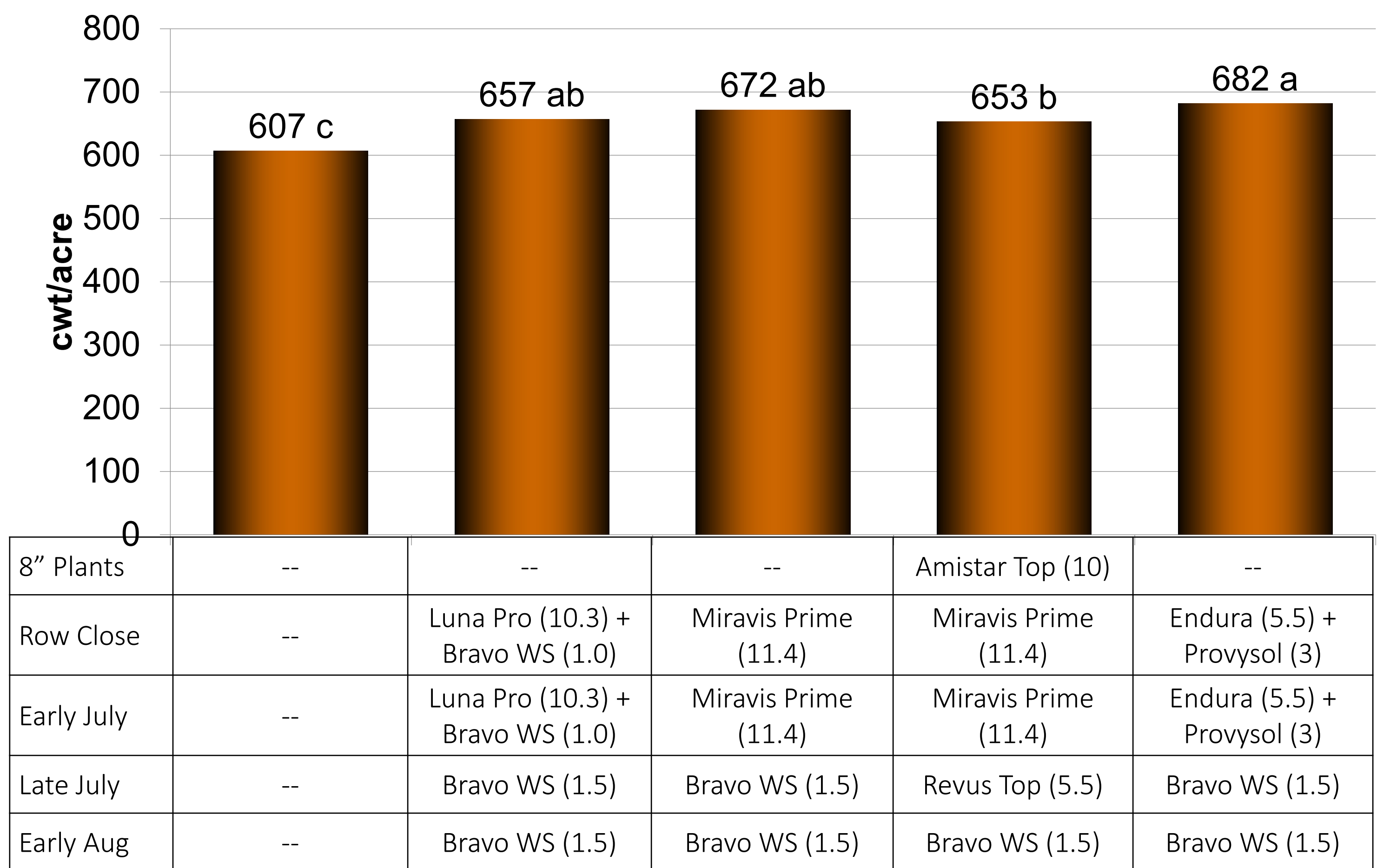
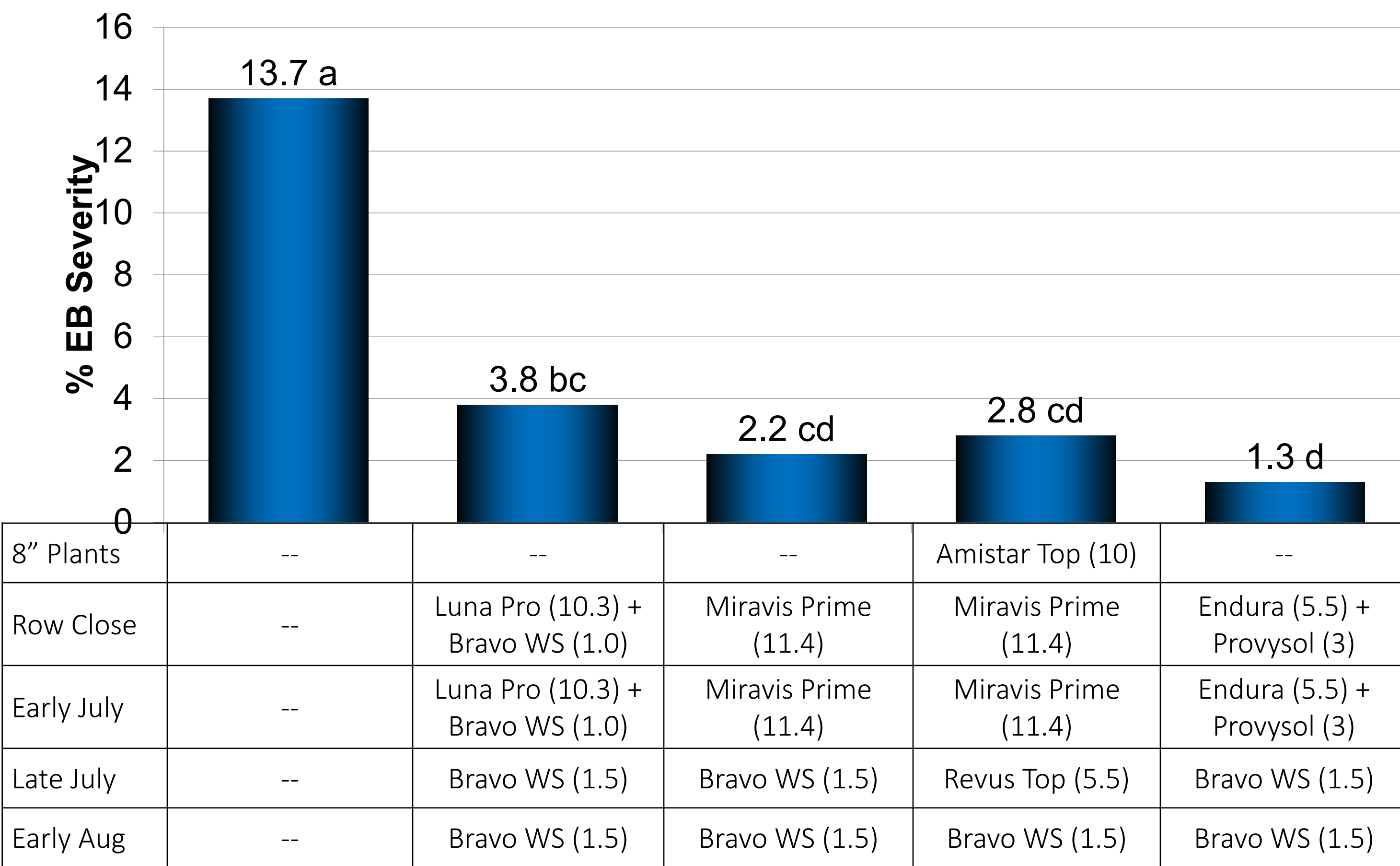
Research shows a 4-spray program starting at row closure with applications on a 14-day schedule are the most effective.

Late blight has been rare. When late blight occurs, additional products are used and program costs increase.

Timing	Bayer	Syngenta 1	Syngenta 2	BASF
8" Plants	--	--	Amistar Top(10)	--
Row Close	Luna Pro (10.3)+Bravo (1) \$37.33 + \$3.13	Miravis Prime (11.4) \$36.58	Miravis Prime (11.4) \$36.58	Endura (5.5)+Provysol (3) \$20.02 + \$15.91
Early July	Luna Pro (10.3)+Bravo (1) \$37.33 + \$3.13	Miravis Prime (11.4) \$36.58	Miravis Prime (11.4) \$36.58	Endura (5.5)+Provysol (3) \$20.02 + \$15.91
Late July	Bravo WS (1.5) \$4.69	Bravo WS (1.5) \$4.69	Revus Top (5.5) \$15.92	Bravo WS (1.5) \$4.69
Early August	Bravo WS (1.5) \$4.69	Bravo WS (1.5) \$4.69	Bravo WS (1.5) \$4.69	Bravo WS (1.5) \$4.69
Application Cost*	\$60.00	\$60.00	\$60.00	\$60.00
Total Cost:	\$150.28	\$142.54	\$153.77	\$141.24

*Cost estimates from 2024 based on what it would have cost Miller Research personnel to purchase these products from our local distributor. Assuming \$15/acre for aerial application, 4 applications. Application rates given as fl oz for all but Bravo WS which is given in pints.

2023 Results



Year	Early Blight Severity (% Disease)			
	Untreated Check	Fungicide Program	% Control	+ cwt/acre (%)
2016	40	10	75	9 (1.3)
2017	27	8	70	31 (4.5)
2018-1	18	2	88	35 (5.0)
2018-2	24	3	88	3 (0.4)
2019-1	31	3	89	5 (0.8)
2019-2	21	4	82	15 (2.4)
2020	22	3	86	28 (4.2)
2021	33	14	58	33 (5.3)
2022	18	5	73	35 (5.1)
2023	41	22	47	65 (10.7)
Average	28	7	76	26 (4.0)

No correlation between disease control and yield.
Fungicides benefit Ranger more than Burbank.
Fungicide programs are like insurance policies.

Base contract price: \$10.60/cwt
Avg. Increase = ~\$275
Avg. Cost = \$147
Net Increase = \$128

