

# Leaf Removal Field Trial 2018/2019

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# Leaf Removal Field Trial 2018/2019

Objective:

**Investigate the impact of mechanical and manual fruit zone leaf removal on berry chemistry, yield and bunch rots in a Southeastern *Vitis vinifera* Vineyard**

Two varieties:

**Merlot + Chardonnay**

# Leaf Removal Field Trial 2018/2019

Treatments (post-bloom fruit zone leaf removal):

- (1) Removal of 2 leafs opposite of clusters
- (2) Removal of 4 leafs
- (3) Removal of 6 leafs
- (4) Crew
- (5) Mechanical Leaf Removal
- (6) No Leaf removal (Control)

5 replicates, 4 vines per replicate. 2018 and 2019.

**Merlot + Chardonnay**



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# Leaf Removal: Yield

Chardonnay 2018

Treatment	Berry weight (g)	Cluster #	Tons per acre
2 Leaf removal	1.5	28.9	3.2
4 Leaf removal	1.48	28.15	3.2
6 Leaf removal	1.47	29.65	3.3
Crew	1.45	32.9	3.8
Mechanical	1.51	29.45	3.2
Control	1.54	28.95	3.2

Merlot 2018

Treatment	Berry weight (g)	Cluster #	Tons per acre
2 Leaf removal	1.39	29.68	2.94
4 Leaf removal	1.31	25.8	2.46
6 Leaf removal	1.29	25.5	2.16
Crew	1.41	25.83	2.64
Mechanical	1.32	27.1	2.52
Control	1.42	27.6	2.70

# Leaf Removal: Chemistry

Chardonnay 2018

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Treatment	Brix	pH	TA (g/L)
2 Leaf removal	18.66	3.676	4.608
4 Leaf removal	18.8	3.694	4.562
6 Leaf removal	18.84	3.682	4.476
Crew leaf removal	19.16	3.712	4.414
Mechanical	18.58	3.71	4.486
Control	18.78	3.662	4.826

Merlot 2018

Treatment	Brix	pH	TA (g/L)
2 Leaf removal	17.46	3.622	<b>4.138</b>
4 Leaf removal	18.56	3.722	3.788
6 Leaf removal	18.62	3.766	3.634
Crew leaf removal	18.2	3.734	3.722
Mechanical	18.02	3.736	3.824
Control	18.02	3.586	<b>4.154</b>









# Leaf Removal: Disease Chardonnay 2018

Treatment	Disease Severity (%)	Disease Incidence (%)
Mechanical	0.688	21.2
<b>Control</b>	<b>2.94</b>	<b>36</b>
4 leaf removal	0.538	18.8
6 leaf removal	1.108	21.6

# Leaf Removal: Mechanical

## Leaf Removal Economy



A leafpuller can be operated for 8 to 10 hours per day before it needs to be cleaned.

It is 15 to 20 times faster than manual leaf pulling.

A mechanical leaf puller can save costs and increase the efficacy of vineyard canopy management



**Thank you for your  
attention**

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