Yeast Nutrient Comparison in Chardonnay (2015)
King Family Vineyards
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Summary:

Two tons of identically sourced Chardonnay was harvested at approximately 22-23 Brix and whole cluster pressed using the champagne press program. 2/3 of the total press volume was transferred to a single tank, which received 3g/hL SO2 and Cynn-Free (Scott Labs) at 20mL/ton. After settling, the juice was racked into four identical 2013 barrels with each barrel receiving one of three nutrients listed:

1) Control – No nutrient added

2) Go Ferm Protect (GF) (Scott Lab): following rehydration protocol provided by Scott Laboratories.

3) Fermaid O (FO) (Scott Lab): 40g/hL of Fermaid O, half distributed at the end of lag phase and half between one third and one quarter sugar depletion.

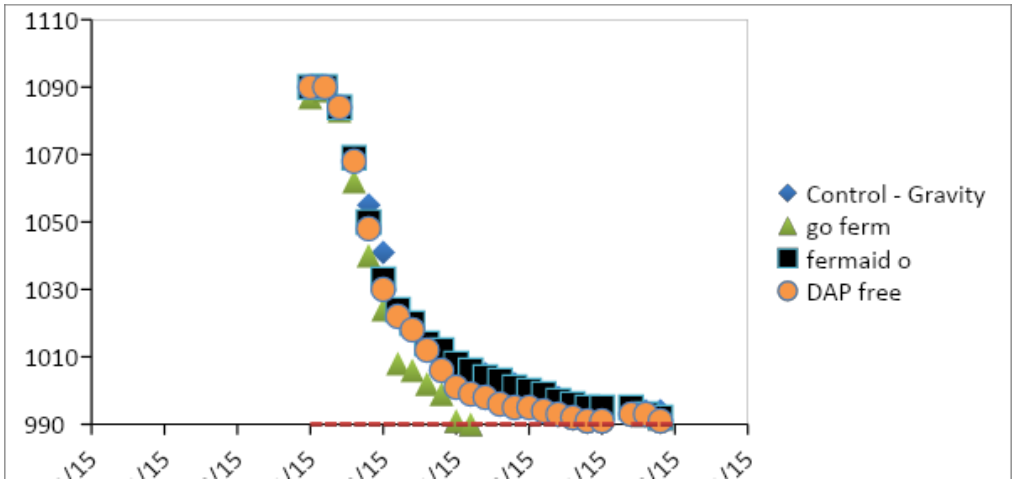
4) Fermoplus DAP Free (FP) (AEB): 13g/hL Fermopus DAP Free at inoculation, 13g/hL at end of lag phase, and 13g/hL at one third sugar depletion.

Each barrel was inoculated with CY3079 (Scott Laboratories) at 25g/hL. Once specific gravity is below 1.00, batonnage was performed on all barrels twice a week. Following MLF, each barrel received a 10g/barrel SO2 addition, and battonage once weekly. Wines aged on lees for an additional 8 months.

Lab Results:

	pH	TA (g/L)	AA (g/L)	%EtOH	Gluc+Fruc	Malic	TSO2	FSO2
Control	3.84	3.92	0.46	13.68	52	1	93	16
GF	3.78	3.99	0.47	13.58	33	1	92	20
FO	3.81	3.87	0.53	13.76	49	1	95	14
FP	3.78	4.21	0.44	13.74	44	4	104	10

PCR Panel (cells/mL)				
	CTRL	GF	FO	FP
Acetic Acid Bact.	44	61	42	50
Brettanomyces	203	225	none	none
Lactobacillaceae	1.50E5	7.13E5	1.55E4	1.76E4
Oenococcus	5.30E7	4.73E7	2.98E7	6.35E6
Pediococcus	6.36E3	1.68E4	27	217
Saccharomyces	3.03E7	6.03E7	6.19E7	1.20E7
Zygosaccharomyces	503	1.24E3	358	492



Results:

Go Ferm resulted in the most rapid fermentation, but may have increased the instance of *Pediococcus* sp relative to other nutrients. However, the control also showed high concentrations of *Pediococcus*, so this may be a barrel effect. Not much chemical differences were observed.

Of respondents (n=13) 23% preferred the control, 15% preferred Go Ferm, 8% preferred the Fermaid O, and 54% preferred the Fermoplus.