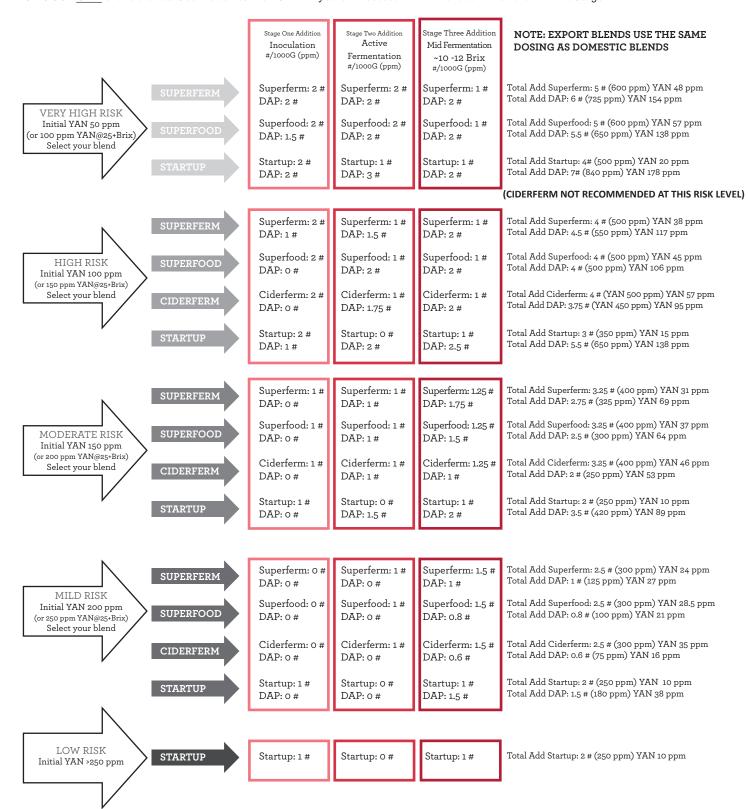
NUTRIENT ADDITION CHARTS

SUPERFOOD, SUPERFERM, CIDERFERM & STARTUP

Lower Brix grapes need less nitrogen, higher Brix grapes need more

CHOOSE ONE of the blends: Use Moderate Risk Chart if you cannot test YAN. Add Vitamix or Vitamix+ at Stage 1.



PLANNING NUTRIENT ADDITIONS

Fermentation Stages

For use with Nutrient Addition Charts on reverse page.

At yeast rehydration: Startup can be added to the water used to rehydrate yeast.

STAGE 1:

At yeast inoculation, or when Saccharomyces yeasts start growing in uninoculated musts (instead of Kloeckera or other non-Saccharomyces vineyard yeast species). Growing yeasts need a wealth of nutrients including nitrogen, mineral, vitamins, and survival factors. If nitrogen is limited during growth, fewer cells will be produced.

STAGE 2:

Fermentation is fully underway (actively bubbling, raised cap) and Brix has dropped around 3 to 4 degrees. At this point the yeasts will have taken up most of the nitrogen present in the juice, especially ammonia nitrogen.

STAGE 3:

Mid-fermentation, around 10 Brix. Yeast growth has stopped, but alcohol is low enough that yeasts can still take up nitrogen. Nitrogen at this point helps replenish the supply in existing cells without producing more cells.

Recommended levels for YAN (JUICE YAN PLUS ADDED YAN)

YAN (ppm) = Ammonia N + Alpha-amino N

 21 Brix or less:
 200- 250 ppm YAN

 23 Brix:
 250- 300 ppm YAN

 25 Brix:
 300- 350 ppm YAN

Add last dose before 10 Brix (or test ability of yeasts to still pick up nitrogen)

> Also add Vitamix (0.1 g/hL; 1 ppm) or Vitamix+ (2.5 g/hL; 25 ppm)

ADD STARTUP TO YEAST REHYDRATION WATER FOR A STRONG START

Recommended TOTAL YAN levels (in grapes plus added N)

23 Brix: 250 ppm

25 Brix: 300 ppm

> 25 Brix: 350 ppm+

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ı	CONVERSION CHART			
ı	for metric and English measure			
ı	(100 ppm = 0.10 g/L or 10 g/HL)			
ı				
ı	ppm	<u>lb/1000G</u>	g/hL	
ı	50	0.4	5	
ı	75	0.6	7.5	
ı	100	0.8	10	

ppm	<u>lb/1000G</u>	g/hL
50	0.4	5
75	0.6	7.5
100	8.0	10
125	1.0	12.5
150	1.25	15
200	1.7	20
250	2.0	25
300	2.5	30
400	3.3	40
500	4.0	50

PLEASE NOTE:

By adding nutrients in stages, you can SLOW DOWN or REDUCE the additions if the fermentation is going too fast.

Adding nutrients all at once, or using sustained-release preparations, does not allow real-time response to different fermentation kinetics.

Add nutrients in portions during the first half of fermentation,

NOT all at once!