



Fertility program comparisons on Fruit Quality on Concord grape production in Central Michigan. Experiment 15 – P104B

Experiment Info:

Planted:	5-29-2010
Harvest:	9-23-2015
Yield Goal:	7 tons/ acre
Target Fert.:	
Variety:	Concord
Population:	545 vines / acre
Row Width:	
Prev. Crop:	
Plot Size:	10' X 32'
Replications:	3
Rootstock:	Concord

Soil Test Values (ppm):

pH:	7.3
CEC:	8.6
%OM:	1.3
Bray P1:	211
Bicarb P:	-
K:	124 ppm
S:	2 ppm
%K:	3.7
%Mg:	21.6
%Ca:	74.4
%H:	-
Zn:	13 ppm
Mn:	5 ppm
B:	0.8 ppm

Objective:

Compare fertility programs impact on the fruit quality of Concord grape vines in Central Michigan.

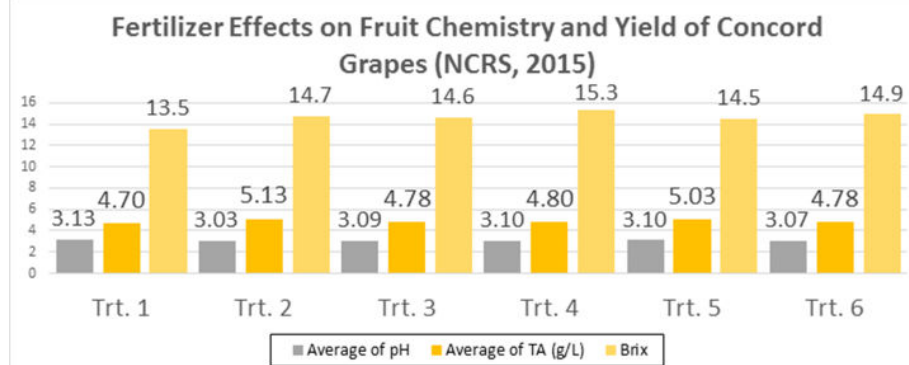
Material & Methods:

In the spring of 2010, this research vineyard was established with two rows of concord grapes. The rows were spaced ten feet apart and the in-row spacing for the vines was eight feet. Each plot contained four vines (4 vines x 8 ft.). These vines were established and trained to a High Wire Cordon System. The 2013 season was the first cropping year for this block of grapes. During spring, the vines were all pruned to a proper cropload level based on the 30+10 pruning formula. Pesticide applications to provide disease and insect control were applied uniformly across all plots as necessary during the growing season. A base soil applied program for the AgroLiquid plots included (all rates are per acre) 11 gallons of High NRG-N + 4.2 gallons of Pro-Germinator + 4.2 gallons of Sure-K + 1 gallons of Micro 500 + 0.125 gallons of Manganese. All of different fertility products were applied on 5-6-2015 in a band next to the vines. The various foliar fertility programs were applied to the selected plots at full bloom (June), bunch closure (July) and Veraison (August) utilizing a backpack sprayer as follows (all rates are per acre):

- Trt. 1 = Conventional Fertilizer: 12 gallons of 28%UAN + 12.9 gallons of 10-34-0 + 100 lbs. of SOP all fertilizer soil applied in the spring.
- Trt. 2 = AgroLiquid base program only.
- Trt. 3 = AgroLiquid base + fertiRain: fertiRain applied three times at 2 quarts per application.
- Trt. 4 = AgroLiquid base + Fase2: Fase2 applied three times at 2 quarts per application.
- Trt. 5 = Conventional + Fase2: Same soil applied as Trt.1 plus Fase2 applied three times at 2 quarts per application.
- Trt. 6 = AgroLiquid base + PTS: PTS applied three times at 2 ounces per application.

To conduct fruit chemistry measurements, 100 random berries were then selected from each plot to be combined and crushed at harvest

Results:



Conclusions:

- The plots treated with the AgroLiquid products had better fruit chemistry compared to the plots that were treated only with only the conventional fertilizer.
- Plots that included Fase2 as the foliar application had increased sugar content compared to the plots that did not have the application made (Trt.1 Vs. Trt.5 & Trt. 2 Vs. Trt.4)
- Plots treated with PTS had the largest increase in sugar content compared to the other plots.