



## Effects of Foliar Applied Nutrient Program on High Density Gala Apples in Michigan. Experiment 15 – 806F

### Experiment Info:

Planted:	2012
Harvest:	9-21-2015
Yield Goal:	1500 bushels
Target Fert.:	
Variety:	Gala
Population:	1100 / acre
Row Width:	
Prev. Crop:	
Plot Size:	10 trees
Replications:	4
Rootstock:	Bud 9

### Soil Test Values (ppm):

pH:	7.7
CEC:	9.5
%OM:	1.2
Bray P1:	23
Bicarb P:	-
K:	129 ppm
S:	7 ppm
%K:	2.1
%Mg:	17.2
%Ca:	70.2
%H:	0.6
Zn:	1.2 ppm
Mn:	8 ppm
B:	0.5 ppm

### Objective:

Determine the effects various foliar applications have on yield and plant growth on high density Gala apples.

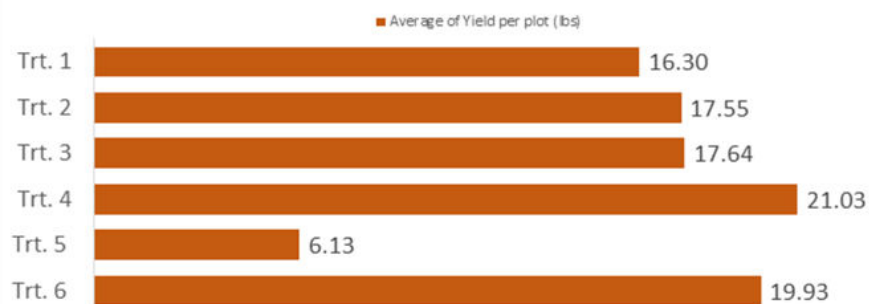
### Material & Methods:

In the spring of 2012, the apple trees were planted at a spacing of 3.5 feet between trees and 11 feet between rows. All the trees are trained to slender spindle. Within the row, the plots are separated by ornamental crab apple trees to be used as a border tree and as an additional source of pollen at the time of flowering. In the spring of 2014, all of the trees were headed at 18" above the soil and new tops were trained to the trellis. A base soil applied program for the AgroLiquid plots included (all rates are per acre) 12 gallons of High NRG-N + 5 gallons of Pro-Germinator + 0.5 gallons of Micro 500 + 0.125 gallons of Boron + 0.125 gallons of Manganese. All of different fertility products were applied before bloom in the spring in a band next to the trees. The various foliar applied fertility programs are as follows (all rates are per acre):

- Trt. 1 = Agroliquid base program only.
- Trt. 2 = Agroliquid + Fase2: Foliar applications of Fase2 at 2 quarts applied monthly. A total of 5 applications in season.
- Trt. 3 = Agroliquid + Fase2 + Mo: Foliar applications of Fase2 at 2 quarts and 1 pint of Microlink Moly applied monthly. A total of 5 applications in season.
- Trt. 4 = Agroliquid + Fase2 + Liberate Ca: Foliar applications of Fase2 at 2 quarts and 1 quart of Liberate Ca applied monthly. A total of 5 applications in season.
- Trt. 5 = Conventional (Dry Only): Urea at 65lbs. + DAP at 109lbs. + SOP at 100 lbs. + Micro nutrient dry blend at 5 lbs.
- Trt. 6 = Conventional (Dry Only) + Fase2: Urea at 65lbs. + DAP at 109lbs. + SOP at 100 lbs. + Micro nutrient dry blend at 5 lbs. Additional foliar applications of Fase2 at 2 quarts applied monthly. A total of 5 applications in season.

### Results:

**Effects of Foliar Applications on High Density Gala Orchard (NCRS, 2015)**



### Conclusions:

- Fase2 applications improved fruit yield. The greatest improvement in yield was when applied to the plots treated with dry fertilizer only.
- Adding Liberate Ca to the monthly foliar application produced the highest yield overall.
- 2015 was the first reportable harvest from the treatment areas, these same fertility programs will continue and will only be slightly adjusted based on the soil test results.