



Effects of Soil Applied Nutrient Program on High Density Gala Apples in Michigan. Experiment 15 – 806E

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:

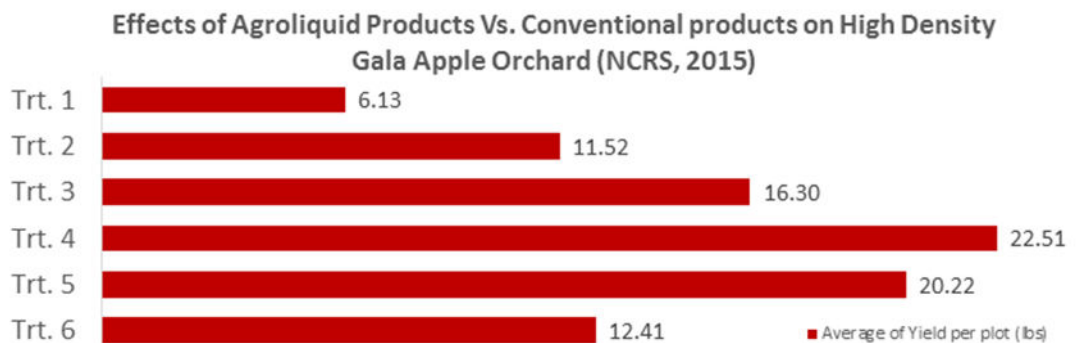
Determine the effects various soil fertility applications have on yield and plant growth on high density Gala apples.

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. Within each plot, a total of ten research Gala trees are in a replication, with a total of four replications used randomly split throughout the orchard planting. 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) 5 gallons of Pro-Germinator + 0.5 gallons of Micro 500 + 0.125 gallons of Boron + 0.125 gallons of Manganese. All of the different fertility products were applied before bloom in the spring in a band next to the trees. The various soil applied fertility programs are as follows (all rates are per acre):

- Trt. 1 = Conventional (Dry Only): Urea at 65lbs. + DAP at 109lbs. + SOP at 100 lbs. + Micro nutrient dry blend at 5 lbs.
- Trt. 2 = Conventional (Dry + Liquid): SOP at 100 lbs. + Micro nutrient dry blend at 5 lbs. + 28%UAN at 12 gallons + 13 gallons of 10-34-0.
- Trt. 3 = AgroLiquid base program.
- Trt. 4 = AgroLiquid: 12 gallons of N-Response
- Trt. 5 = AgroLiquid (+20%): 14.5 gallons of High Nrg-N + 6 gallons of Pro-Germinator + 0.75 gallons of Micro 500 + 0.125 gallons of Boron + 0.125 gallons of Manganese.
- Trt. 6 = AgroLiquid: 15 gallons of eNhance/28%UAN

Results:



Conclusions:

- The plots that had the soil applied AgroLiquid products outperformed the conventional plots throughout the orchard.
- Highest yielding treatment was the increased rate of AgroLiquid program compared to the demands of the soil.
- 2015 was the first reportable harvest from the treatment areas, these same fertility programs will continue in