

Experiment Info:	
Exper.:	P-101-13
Planted:	May 1 2010
Variety:	Jersey
Population:	8,740
Plot size:	5' x 20'
Replications:	Five
Harvest:	Multiple

Soil Test Values (ppm):	
Farm/ Field	106
pH:	6.6
CEC:	8.9
%OM:	2
Bray P1:	33
Bicarb P:	-
K:	46
S:	10
%K:	1.3
%Mg:	16.9
%Ca:	75.3
%H:	5.9
% Na:	0.6
Zn:	1.9
Mn:	3
Fe:	45
Cu:	0.8
B:	0.4

Objective:

Determine the best means to fertilize asparagus plants for maximum yields per harvest and over the entire harvest season.

Materials & Methods:

- The asparagus for this trial was planted as one year old crowns in 2008 and was six years old this season. Starting in 2009, the treatments described in Table A1, have been followed
- The dry products used for these applications were broadcast over the center section of each plot and lightly incorporated as the plots were tilled for weed control in the spring prior to any spear emergence. All liquid fertilizers were banded with streamer bars producing a fertilizer stream with 12" spacing directly over the area of crown development. During the course of the growing season, irrigation and pesticides were applied uniformly to all plots as necessary.
- Foliar applications (Table A1) started in Mid-June, typically two weeks after the final harvest and continued on a monthly basis for a total of four foliar applications per season. After a killing frost in the fall, the plots were mowed and left until the spring of when the plots were cleaned, herbicides applied and prepared for a new season of growth and harvesting.
- The initial harvest occurred on May 2nd and was repeated two or three times per week over a one month period during 2014 where data was collected. As the size and quantity of the spears fell, and the asparagus harvest stopped and it was allowed to grow vegetatively for the remainder of the 2014 season.

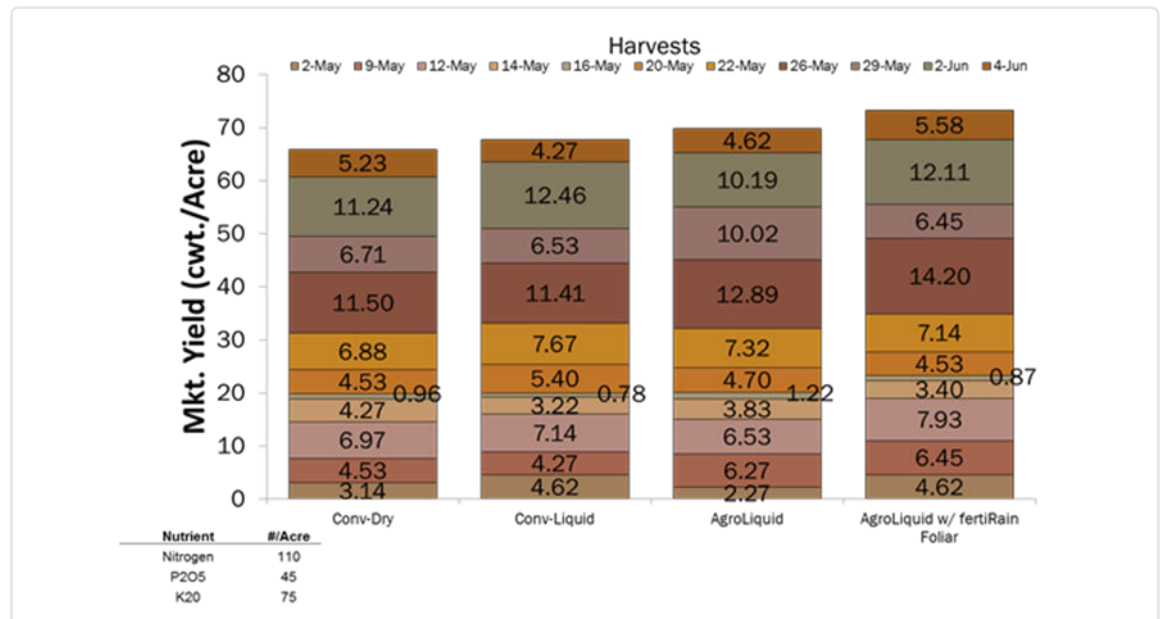


Figure A1. Cumulative yields from multiple harvests during 2014 for fresh market asparagus.

Table A1. Asparagus soil fertility program comparisons and benefit of foliar fertiRain on crop yield, 14-P101, Jersey Supreme.

	Treatment	Rate/A	Method of Application	Nutrient lbs/A	NUE**	Yield Cwt/A
1	46-0-0+0-0-60+18-46-0+Mn+Zn 46-0-0+0-0-60 Conv Dry	97 lbs,60 lbs, 100 lbs,4 lbs, 4 lbs, 115 lbs,60 lbs	spring summer	233.5	28.2	65.9
2	28% + 0-0-60 + 10-34-0 + Mn+Zn 28% + 0-0-60 Conv Liq	16 gal+75 lbs+11.8 gal+ 4 lbs+4 lbs 18 gal+75 lbs	spring summer	234.0	29.0	67.8
3	HN + PG + SK+ M-500 +Mn HN + SK Agro-Liquid	11gal+5 gal+6 gal+0.75 gal+0.25 gal 11 gal+6 gal	spring summer	93.7	74.6	69.9
4	HN + PG + SK+ M-500 +Mn HN + SK ferti-Rain Agro w/ fertiRain	11gal+5 gal+6 gal+0.75 gal+0.25 gal 11 gal+6 gal 4 applications X 2 gal	spring summer Monthly - Fern	108.0	67.9	73.3

* Micronutrients not included in total fertilizer per acre calculations. ** NUE = Nutrient Use Efficiency = Lbs Yield / Total Lb. N,P,K & S as Fertilizer Applied, HN = High NRG-N, PG = Pro-Germinator, SK= Sure-K.

Conclusions:

- When all measured harvests were combined, the AgroLiquid treatments (Trt #3 & #4) produced slightly more asparagus than the either conventional fertility program.
- Foliar application of fertiRain added to the AgroLiquid program on asparagus after it was allowed to go to fern in 2013 resulted in noticeable yield increases for the 2014 season. Typically yields on any given harvest date for this treatment matched or exceeded the yields of all other treatments during the 2014 season. Foliar feeding the asparagus fern development the prior season resulted in stronger yields during the current season. This has been consistently shown over the last several years in this trial.
- The Nutrient Use Efficiency for the AgroLiquid based programs (Trt # 3-4) was 2X or greater than observed for conventional based fertility programs. More yield with less actual fertilizer applied. This can be very significant environmentally in the sandy soils were asparagus is commonly grown.