

Experiment Info:	
Exper.:	WA-Onions
Planted:	
Variety:	
Population:	
Plot size:	
Replications:	
Harvest:	

Soil Test Values (ppm):	
Soil	
pH:	
CEC:	
%OM:	
Bray P1:	
Bicarb P:	
K:	
S:	
%K:	
%Mg:	
%Ca:	
%H:	
%Na:	
Zn:	
Mn:	
Fe:	
Cu:	
B:	

Objective:

Determine the impact of various surface band starter and foliar treatments on the yield and quality of yellow storage onions in Washington.

Materials & Methods:

- During the spring of 2014, a machine planted trial in a commercial drip irrigated field that was thinned and/or transplanted to identical plant populations in all rows - 68" wide, 8-row beds. Five different fertilizer programs were banded over a 25 ft long area. This trail was a randomized complete block design with four replications of all treatments. With the exception of the treatments described below in Table O1, all other pre-plant and in-season fertility applications were uniformly applied to all plot areas.
- Data collected includes; total yield, yield by grade size, average bulb weights, yield for bulb count by grade size and an economic assessment. The study is conducted in the Southern portion of the Columbia Basin in Washington State. Onions were allowed to grow for the full season and lifted in late August to dry and then on Sept. 4th, the onions from each plot were collected, sorted and weighted to determine treatment affects.
- Local onion prices for the date these plots ere harvested were used to estimate treatment values.

Table O1. Onion pre-emergence and foliar fertility programs comparisons for yellow storage onions.

Trt	Products Applied	Treatment Rate	Timing
1.	Untreated	None	
2.	Grower Standard	10-34-0 @ 7 GPA Humic Acid @ 1 GPA	Pre-Emergence
3.	AgroLiquid	Pro-Germinator @ 4 GPA Sure-K @ 2.5 GPA Micro 500 @ 2 qt/Acre	Pre-Emergence
4.	AgroLiquid w/ Sure-K Foliar	Pro-Germinator @ 4 GPA Sure-K @ 2.5 GPA Micro 500 @ 2 qt/Acre	Pre-Emergence
		Sure-K @ 2 GPA	6" top growth then monthly (5 apps)
5	AgroLiquid w/Complete Foliar	Pro-Germinator @ 4 GPA Sure-K @ 2.5 GPA Micro 500 @ 2 qt/Acre	Pre-Emergence
		Sure-K @ 2 GPA Pro-Germinator @ 2 qt/Acre Micro 500 @ 1 pt/Acre	6" top growth then monthly (5 apps)

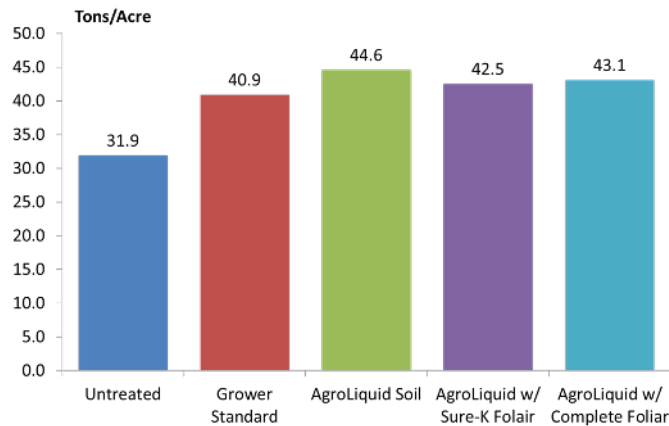


Figure O1. Effect of three fertility programs on the total yield of yellow storage onions, 2014.

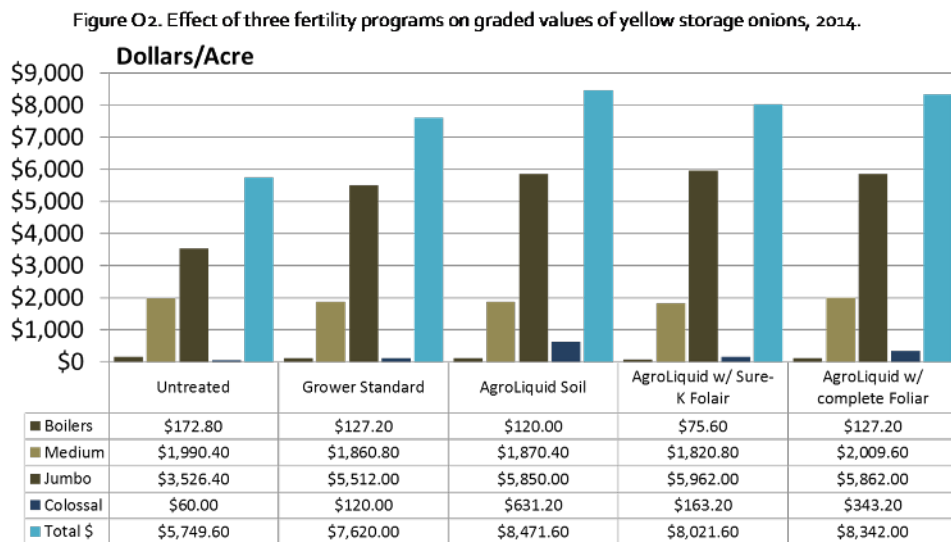


Figure O2. Effect of three fertility programs on graded values of yellow storage onions, 2014.

Conclusions:

- The Grower Standard program increased the onion yield by nearly 10 tons per acre and also improved the crop value compared to the untreated onions.
- The AgroLiquid soil only application had the greatest onion yield in the trials, 44.6 tons, a 3.6 ton increase over the grower standard. This treatment also had a high crop value by producing the highest yield of colossal sized onions.
- The foliar applications to the onions in this trial did enhance the yield of the jumbo sized onions. In previous trials, these same treatments enhanced the colossal sized onion yields too. Sure-K foliar also had the lowest percentage of boiler sized onions, therefore promoting a higher average value per ton of onions produced.
- Complete details from this trial are available upon request, these pages are intended to summarize key points from this contract research trial by Holland Agriculture Services, Pasco, WA.