



Onions

With AquaVantage®

- AquaVantage has shown increases in stand, size categories and total yield in commercial growing conditions.
- AquaVantage **AV 16-30** should be applied at 7 lbs. per acre at planting or bed formation.
- Gandy Orbit Air, PDA, PDM and Horstine Microband Applicators can all be used to ensure accurate delivery of AquaVantage to the seed furrow.
- AquaVantage **AV 16-30** is the right formulation for all onion growers.
- AquaVantage has no toxic components and biodegrades in the soil like plant residues.



Quincy, WA — Sedona and Caveat Onions

3.86 and 3.31 More Tons/Acre

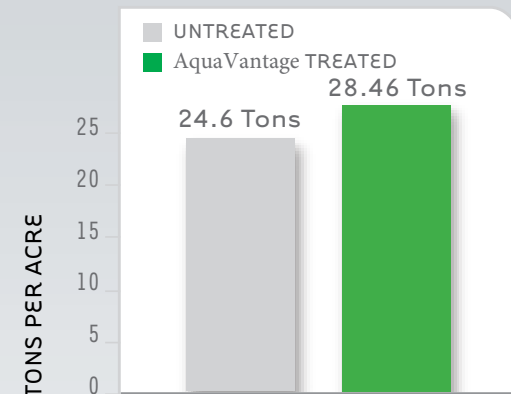


AquaVantage® was applied to onion fields in Quincy, WA. Both yield and quality measurements were taken to determine effect of AquaVantage on onion crops. Results show an increase of 3.86 and 3.31 tons per acre respectively and significant improvements in onion quality.

SEE TRIAL DATA ON REVERSE SIDE →

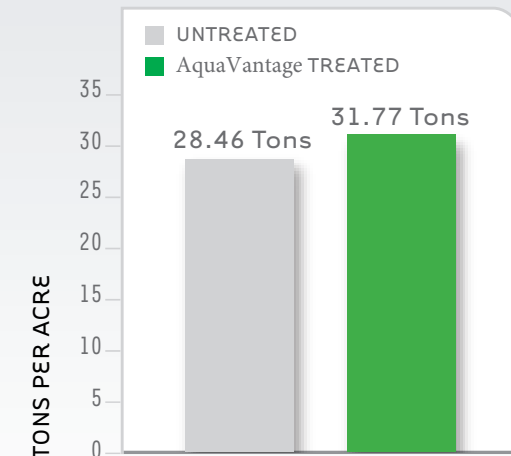
3.86 More Tons/Acre

Sedona Field



3.31 More Tons/Acre

Caveat Field





GENERAL TRIAL INFORMATION

Grower: Kerr & Ruppert LLC

Cooperator: Quincy Farm Chemical

Location: Quincy, WA

Crop: Onions

Variety: Sedona and Caveat

Rate of AquaVantage AV 16-30: 7 lbs per acre

Application: AquaVantage was banded and rototilled into onion rows at planting

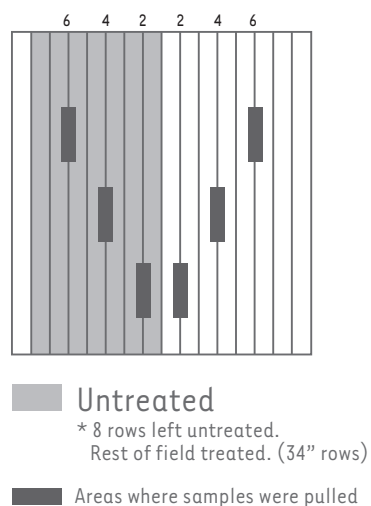
Irrigation: Furrow irrigated

Harvest: Replicated trial samples harvested by hand

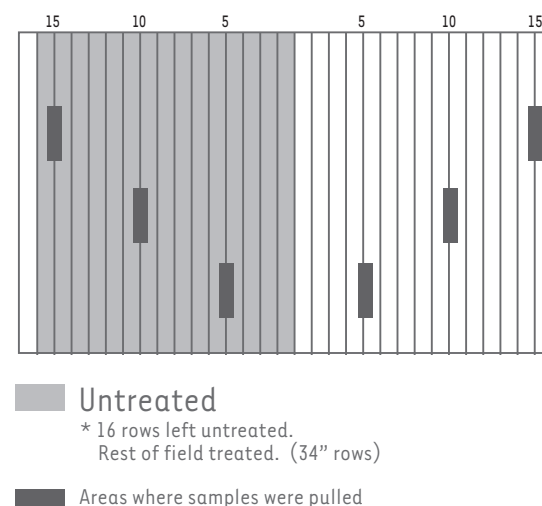
TRIAL RESULTS

FIELD	VARIETY	LBS	TONS/ACRE	% JUMBO (3" +)	% MEDIUM (2 ½-3")	% UNDER-SIZED	USABLES	
							%	TONS/ACRE
Untreated	Sedona	96	24.6	43.75%	37.5%	18.75%	81%	19.93
AV treated	Sedona	111	28.46	46.8%	42.3%	10.8%	89%	25.33
Increase		15.6%	3.86	-	-	-	27%	5.4
Untreated	Caveat	111	28.46	47.7%	35.1%	17.1%	82.8%	23.56
AV treated	Caveat	124	31.77	59.7%	30.6%	9.67%	90.3%	28.69
Increase		11.6%	3.31	-	-	-	21.77%	5.13

Sedona Field Trial



Caveat Field Trial



FIELD DIAGRAM

REVENUE PER ACRE

Field	Untreated	AquaVantage Treated	\$ increase/acre
Sedona	\$2,982.75	\$3,790.87	\$808.12
Caveat	\$3,498.87	\$4,210.80	\$711.93

Calculated from market data pulled Sept. 20, 2007:

- Jumbo – \$3.50/50 lbs
- Medium – \$4.00/50 lbs



Weiser, ID — Sweet Spanish Onions

239.8 More CWT and 28% Higher Stand Count

GENERAL TRIAL INFORMATION

Grower: Appleton Produce Co.

Location: Weiser, ID

Crop: Sweet Spanish Onions

Yield Data Collected: 9/10/07

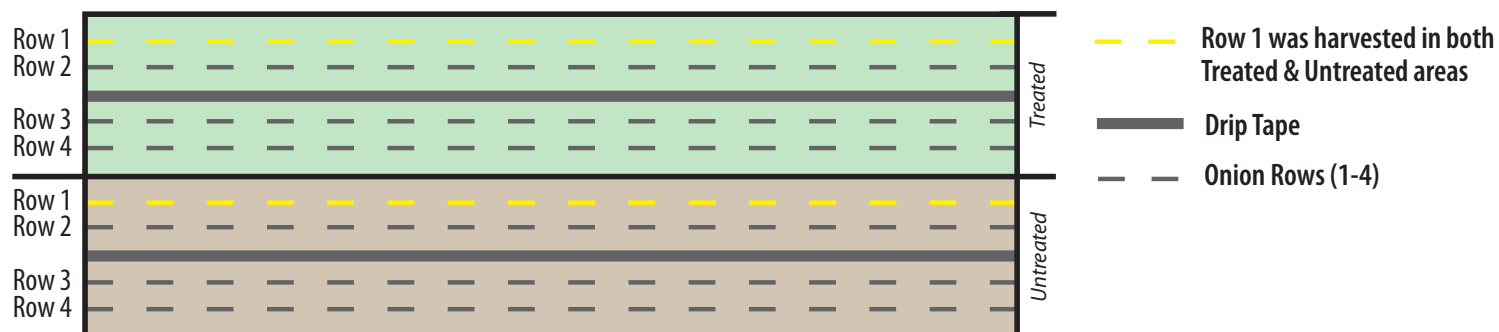
Rate of AquaVantage AV 16-30: 4 lbs per Acre

Application: AquaVantage applied in furrow at planting

TRIAL RESULTS

Average of 6 10 ft Reps	Total Wt	Stand Count (per 10 ft row)	<2 in	2-3 in	3-4 in	4-6 in	5-6 in
Untreated	742.8 cwt.	17.16	1.6	76.36	581.0	83.0	-
AV treated	982.6 cwt.	22	14.1	109.6	739.11	107.9	-
Difference	239.8 cwt.	4.84	12.5	33.24	158.11	24.9	-

* Replicated trial data collected as indicated in diagram below

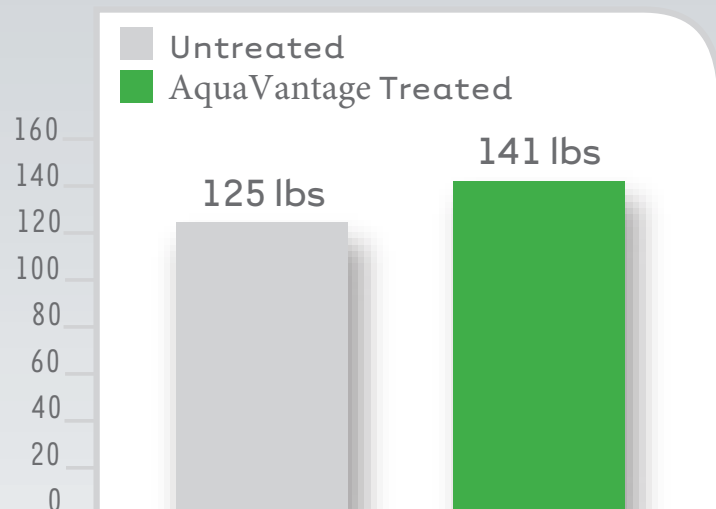


FIELD DIAGRAM - REPLICATED MULTIPLE TIMES



Parma, ID — Onions

13% More Onions With AquaVantage®



GENERAL TRIAL INFORMATION

Grower: Undisclosed

Location: Parma, ID

Crop: Onions

Variety: Yellow

Rate of AquaVantage AV 16-30: 4-5 lbs per acre

Irrigation: Drip

Application: AquaVantage applied at planting

Sampling Date: 9/29/08

RESULTS

AquaVantage

Sample	Untreated	Treated	Increase
1	28 lbs	40 lbs	+12 lbs
2	30 lbs	29 lbs	-1 lb
3	32 lbs	33 lbs	+1 lb
4	35 lbs	39 lbs	+4 lbs
Total	125 lbs	141 lbs	+16 lbs

GRADE OUT

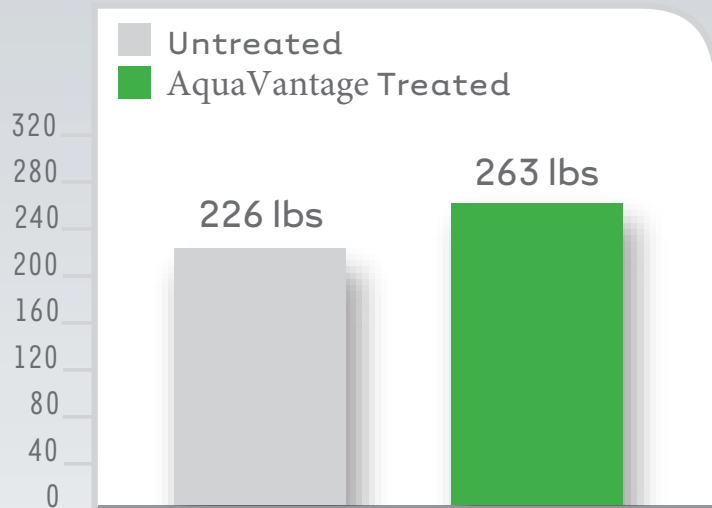
AquaVantage

	Untreated		Treated		Increase
	Lbs	% Total	Lbs	% Total	
Unusable	2 lbs	1.6%	0 lbs	0%	-2 lbs
2.25" to 3" min	3 lbs	2.4%	0 lbs	0%	-3 lbs
3" to 3.75" min	20 lbs	16.0%	11 lbs	7.8%	-9 lbs
3.75" to 4" min	16 lbs	12.8%	26 lbs	18.4%	+10 lbs
4" & Larger	84 lbs	67.2%	104 lbs	73.8%	+20 lbs
Total	125 lbs	100%	141 lbs	100%	+16 lbs



Pasco, WA — Onions

16% Increase in Usables With AquaVantage®



GENERAL TRIAL INFORMATION

Grower: Carr Farms

Location: Pasco, WA

Crop: Onions

Application: AquaVantage applied at planting

Sampling Date: 8/26/08

REPLICATED HAND HARVEST - RESULTS

Sample	AquaVantage		
	Untreated	Treated	Increase
1	68.72 Lbs	78.76 Lbs	+10.04 Lbs
2	60.40 Lbs	69.66 Lbs	+9.26 Lbs
3	53.66 Lbs	67.14 Lbs	+13.48 Lbs
4	48.64 Lbs	55.56 Lbs	+6.92 Lbs
Total	231.42 Lbs	271.12 Lbs	+39.70 Lbs
Total Usable	226.36 Lbs	263.22 Lbs	+36.86 Lbs

REPLICATED HAND HARVEST - GRADE OUT

Size	Untreated		AquaVantage Treated		Increase
	Lbs	% Total	Lbs	% Total	
1" - 2"	13.14	5.8%	12.94	4.92%	-0.2 Lbs
2" - 3"	190.66	84.23%	215.18	81.75%	+24.52 Lbs
3" - 4"	22.56	9.97%	35.10	13.33%	+12.54 Lbs
Total Usable	226.36	100%	263.22	100%	+36.86 Lbs

COMMERCIAL HARVEST RESULTS

Yield increase: AquaVantage treated area yielded 37.8 more bags per acre than the untreated area.

ROI: \$226.80 more than the Untreated area.



Onions – Nyssa, OR

\$1,324 Increase Per Acre in Onions

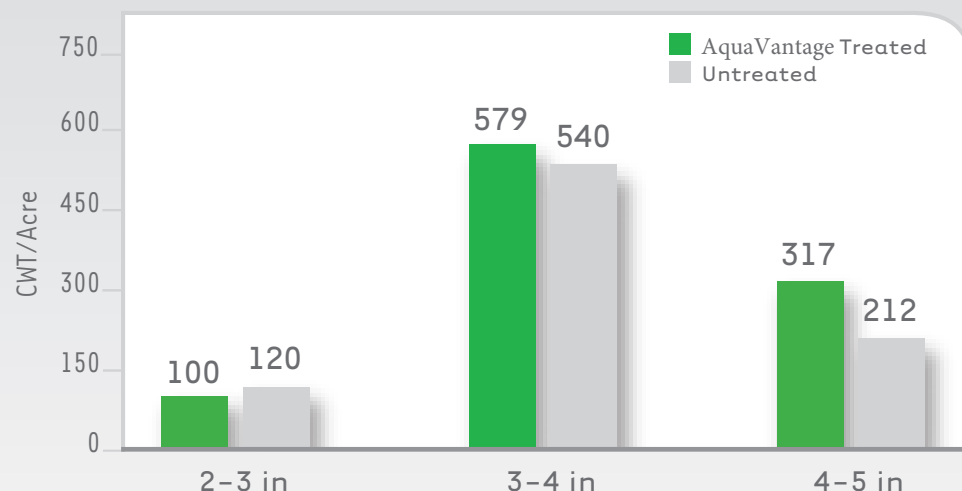
Yield of 2" and Greater Onions

AquaVantage
996 CWT/Acre

Untreated
872 CWT/Acre

Increase
124 CWT/Acre

GRADE OUT



ESTIMATED RETURN PER ACRE

Size Category	Market Value*	AquaVantage	Untreated
2-3 in	\$5.50	\$1,100.00	\$1,320.00
3-4 in	\$5.50	\$6,369.00	\$5,940.00
4-5 in	\$5.50	\$3,487.00	\$2,332.00

Gross Revenue	\$10,956	\$9,592
Revenue Increase	\$1,364/CWT	
ROI (minus AquaVantage)**	\$1,324 or 33X	

*Market value at time of harvest per 50 lb sack

**\$8/lb cost of AquaVantage

GENERAL TRIAL INFORMATION

Researcher: RKS Consulting

Cooperators: Jason Page, Crop Production Services

Location: Nyssa, OR

Crop: Onions

Rate of AquaVantage AV 16-30: 5 lbs per Acre

Application: Applied in furrow at planting with the seed

Irrigation: Furrow irrigated

Harvest Date: 9/09/09



Onions – Parma, ID

\$891 Increase Per Acre in Onions

More CWT/Acre in 2" and Greater Onions

AquaVantage

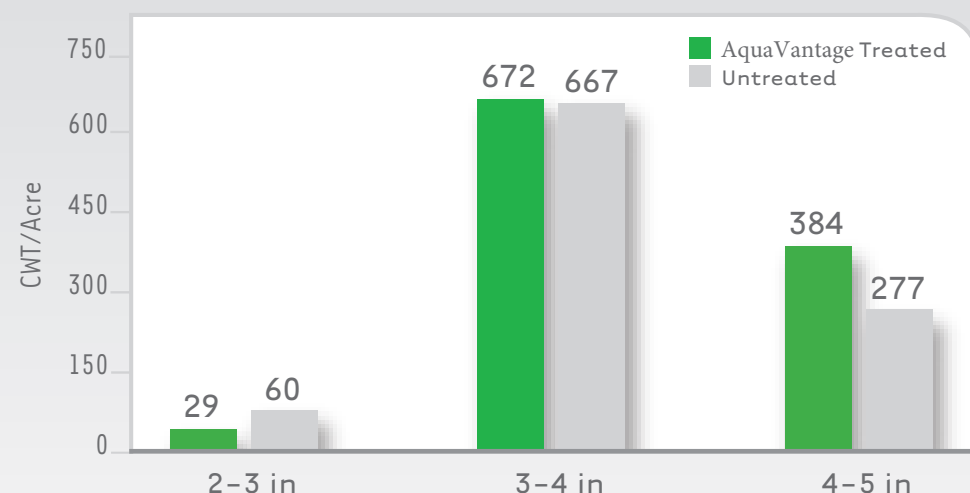
Untreated 1085 CWT/Acre

1004 CWT/Acre

GRADE OUT

Increase

81 CWT/Acre



ESTIMATED RETURN PER ACRE

Size Category	Market Value*	AquaVantage	Untreated
2-3 in	\$5.50	\$ 319	\$ 660
3-4 in	\$5.50	\$7,392	\$7,337
4-5 in	\$5.50	\$4,224	\$3,047

Gross Revenue/Acre	\$11,935	\$11,044
Revenue Increase	\$891/Acre	
ROI (minus AquaVantage)	\$851 or 21X	

*Market value at time of harvest per 50 lb sack

GENERAL TRIAL INFORMATION

Location: Parma, Idaho

Crop: Onions

Variety: Yellow Spanish Hybrid

Rate of AquaVantage AV 16-30: 5 lbs per Acre

Application: Shallow incorporation into the outside part of the planting bed

Irrigation: Drip Tape

Harvest Date: September 2009

Data Collection: RKS Consulting.
4 replicated hand digs in treated and untreated areas of a commercial field.