

Quantum Growth[®]

Beneficial Soil and Plant Microbial Inoculants



ENHANCE PLANT
PHOTOSYNTHESIS



IMPROVE NUTRIENT
AVAILABILITY & TRANSFER



ENHANCE/RESTORE
SOIL BIOLOGY

- Primary photosynthetic microorganism, *Rhodospseudomonas palustris* (~60% of formulation)
- Can help build plant chlorophyll by augmenting physiologically active amounts of 5-Aminolevulinic Acid (ALA; building block for chlorophyll)
- Increase nitrogen availability – 9 species that fix nitrogen and 3 that produce ammonia
- Increase phosphorus availability; 6 species that solubilize phosphorus
- Includes microorganisms that can solubilize K, Fe, Zn, Ca, Mn, Mg & Mo
- Helps restore depleted biological communities
- Increases diversity and functionality of soil bacteria populations

SOYBEAN

54 pods/6 plants
9 pods/plant



121 pods/6 plants
20.17 pods/plant



Control

Quantum-RC

Irrigated Soybean
Treated 64 oz per acre (\$8/ac product cost)
+ 5.2 bu/ac valued @ \$76.65
(price at \$14.74 per bu)
2022 FBN NE Trial

**9.6 X
ROI**

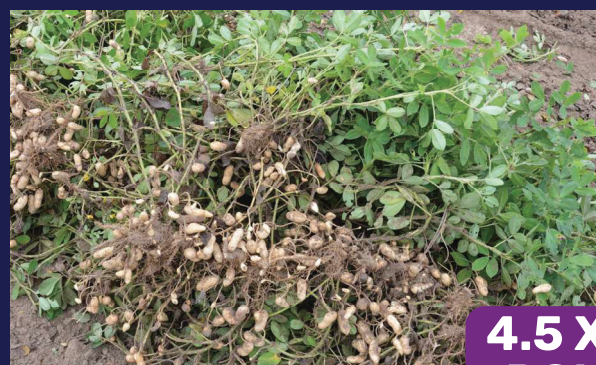


PEANUTS



**4 X
ROI**

Dryland Peanuts
Treated 64 oz/acre in furrow (\$8/ac product cost)
+ 113.4 lbs/ac valued at \$32.55
(price at \$560 per ton; \$9.09 per grade point)
2022 FBN AR Trial



**4.5 X
ROI**

Irrigated Organic Peanuts
Treated 64 oz/acre in furrow (\$10/ac product cost)
+ 309 lbs/ac valued at \$89.63
2021 NMSU NM Trial

CORN



**4 X
ROI**

Irrigated Corn
Treated 64 oz/acre in furrow (\$8/ac product cost)
+ 4.8 bu/ac valued @ \$31.92 (price at \$6.65 per bu)
2021 NC CRO Trial

ALFALFA



**26 X
ROI**

Dryland Alfalfa
Treated 178 oz/ac total (\$22.40 product cost)
+ 5.1 tons/ac valued @ \$586.50
(valued at \$115 per ton)
Independent CA Grower

	Cut 1	Cut 2	Cut 3	Cut 4	Total	% Change
Block 1	NO	14,320	16,453	14,100	44,873	
Block 2	X	21,140*	18,675	15,190	55,005	23%
Block 3	X	14,250	13,152	14,110	41,512	
Block 4	X	15,125	14,512	16,510	46,147	11%

COTTON



Dryland Cotton
Treated 1 gal/ac w/ 50% N (\$16 product cost)
+ 374 lbs/ac valued @ \$321.64 (price at \$0.86 per lb)
Independent CA Grower

**20 X
ROI**

Plot	Quantum Growth	NH ₃ units/acre	% NH ₃ reduction	Cost Sav per acre	Yield lbs.	% Yield increase
1	None	250	0	0	5274	0
2	1 gal/acre	130	48%	\$71.71	5280	0.11%
3	1 gal/acre	120	52%	\$77.69	5334	1.14%
4	1 gal/acre	102	59%	\$88.71	5488	4.06%
5	1 gal/acre	90	64%	\$95.62	5648	7.09%

Product Selection by Crop

Quantum-RC Quantum Peanod

Soybean	Optimal	Effective
Peanut	Effective	Optimal
Corn	Optimal	Effective
Alfafa	Optimal	Effective
Cotton	Optimal	Effective

Available in 2.5 & 275 gal totes

Storage, Tank Mix & Application FAQs

Tank Mix pH Tolerance: 7 to 8 = optimal, 5 to 9 = okay, <5 or >9 marginal to poor

Tank Mix Compatible with: Dual II Gramaxone Princep Trimec
Enlist One Movento Prowl H2O Zidua
Glufosinate Mustang Pursuit Zenith

Tank Mix Instructions: add the Quantum products last and apply within 0 to 12 hrs.

Watering Requirements: min 10 gallons of water (broadcast), 3-5 gals in furrow, no max amt. **Use only non-chlorinated water**

Handling: Does not require special PPE nor are there any re-entry restrictions

Storage: Do not freeze and keep core temperature of container <110° F