



SWEET POTATO TRIALS (COVINTONG)



CARBOXIPOLYOL technology is based on compounds that emulate the natural chelation and complexation from the plant, which may complement soil nutritional management, potentiate photosynthesis processes, translocation of photoassimilates.

CARBOXYPOLYOLS are molecules of organic origin from plant extracts of low molecular weight and highly soluble in water, obtained from the transformation of carbohydrates to aldonic acids that bind to a metal ion to form stable compounds in water and soil through ionic bonds and covalents.



Innovation in Vegetable Chelates and biostimulants.



Vegetable organic chelates and complexes, Eco friendly, nano poly-ionic.



Efficiently management and correction of nutritional deficiencies (Ca, Mg, B, Zn, Cu, Mn, Fe).



Environmental stress management.



Power compensator in critical times of cultivation



Improves stability and promotes mix compatibility.



High concentration in the formulation.



Nutrition and plant health.



Trial details



1. Location: Tressy CA



2. Area plot: 36,9 ft

3. Volume of water: 1 Gal/plot



4. Repetitions per treatment : 3

5. Planting density: 14117 plants/acre



6. Variety: COVINTONG

7. Applications : 2 foliar applications



Methodology.

#	Treatment	Dose
1	Control	----
2	G . CalcioBZn	2 quart/ Acre
3	G. Zinc	2 quart/ Acre
4	A. Kfruto	2 quart/ Acre
5	A.GreenMix	2 quart/ Acre



Data analysis and statistics

- Statistical analyses were performed using **RStudio**.
- Assumptions of normality were assessed using the **Shapiro–Wilk test**
- Homogeneity of variances was evaluated using **Levene's test**.
- Data were subject to three-way Analysis of Variance (**ANOVA**)
- "Different letters indicate significant differences among treatments according to Fisher's Least Significant Difference (LSD) test at $P < 0.05$."





LIQUID COMPLEX FERTILIZER WITH K, P, B, Zn and Molybdenum

GUARANTEED ANALYSIS

Total Nitrogen (N).....	0.22%
0.22% Water Soluble Nitrogen	
Available phosphate (P_2O_5).....	19.4%
Soluble Potash (K_2O)	21.5%
Magnesium (Mg).....	0.6%
Boron (B).....	0.85%
Molybdenum (Mo).....	0.032%
Zinc (Zn).....	0.85%

Density at 68°F: 12.68 Lbs/gal



MULTINUTRIENT CONCENTRATED SOLUBLE WITH Mg and micronutrient.

GUARANTEED ANALYSIS

Total Nitrogen (N).....	3.0%
3.0% Water Soluble Nitrogen	
Soluble Potash (K_2O).....	2.87%
Magnesium (Mg).....	4.54%
Sulfur (S).....	3.19%
Boron (B).....	0.26%
Copper (Cu).....	0.28%
Manganese (Mn).....	1.34%
Molybdenum (Mo).....	0.16%
Zinc (Zn).....	0.76%

Density at 68°F: 11,20 lbs/gal





CONCENTRATED SOLUBLE FERTILIZER WITH Ca, B, Zn and Molybdenum

GUARANTEED ANALYSIS

Total Nitrogen (N).....	4.6%
4.6% Nitrate Nitrogen	
Soluble Potash (K ₂ O).....	4.2%
Calcium (Ca).....	7.0%
Boron(B).....	1.2%
Molybdenum (Mo)	0.04%
Zinc (Zn).....	2.3%

Density at 68°F: 12.09 Lbs/gal



HIGH CONCENTRATED SOLUBLE ZINC FERTILIZER

GUARANTEED ANALYSIS

Total Nitrogen.....	0.3%
0.3% Water soluble Nitrogen	
Soluble Potash (K ₂ O).....	5.0%
Zinc (Zn).....	22.0%

Density a 68°F: 13,79 Lbs/gal

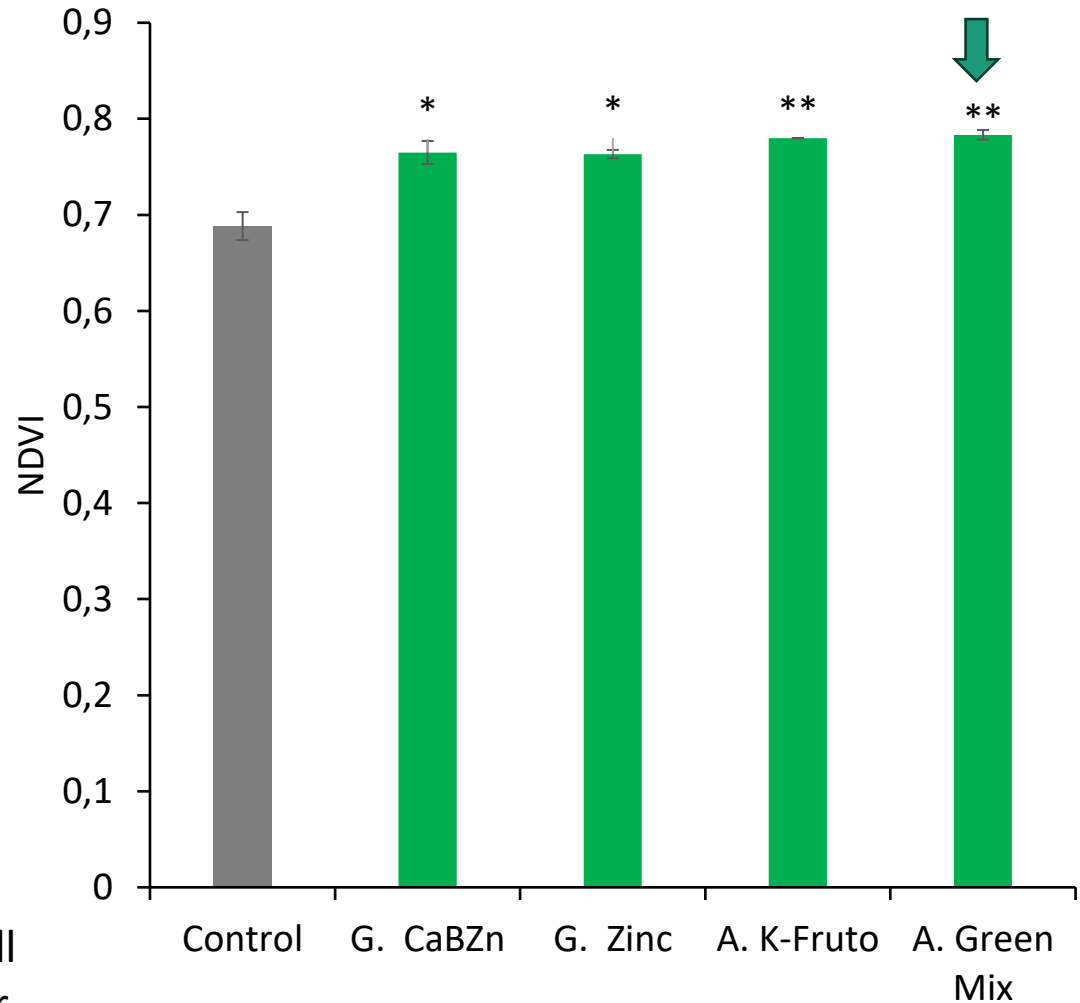


RESULTS

NDVI

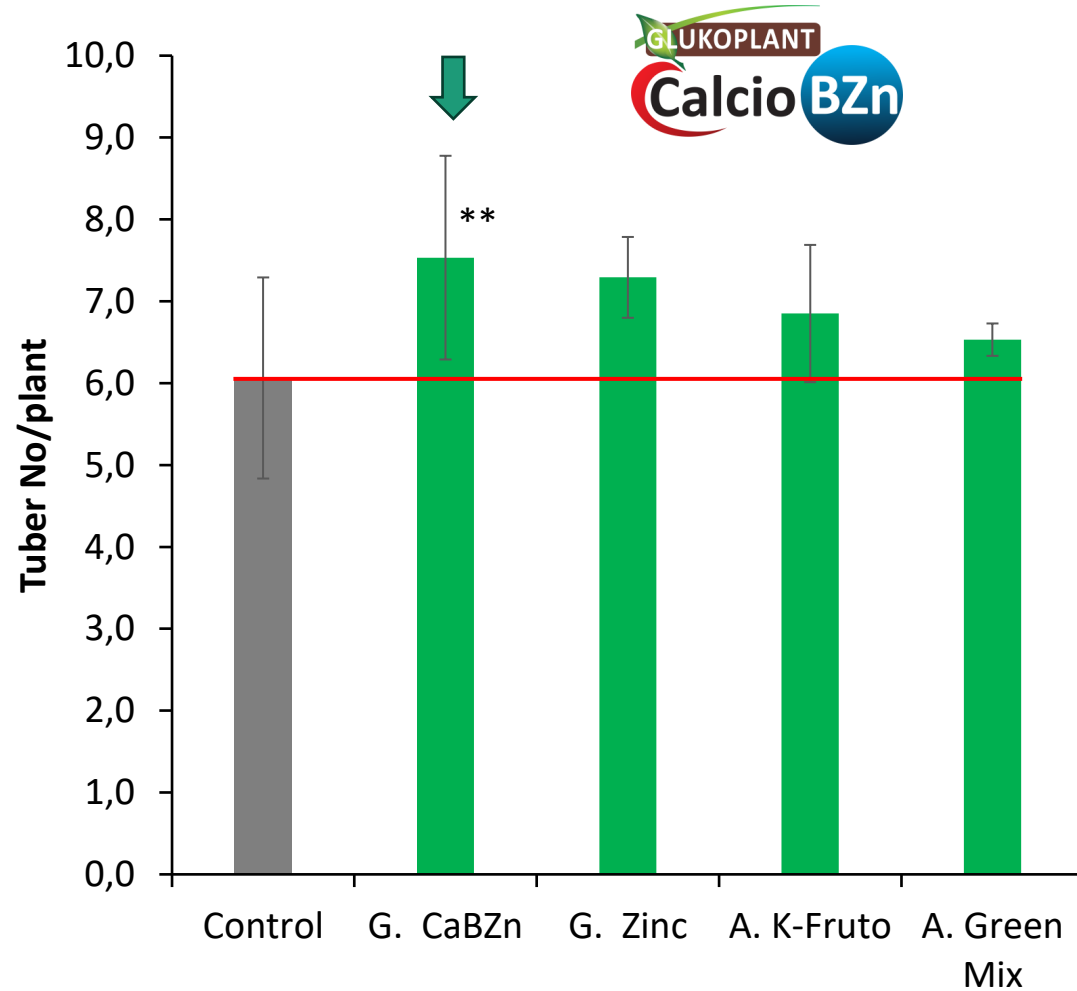
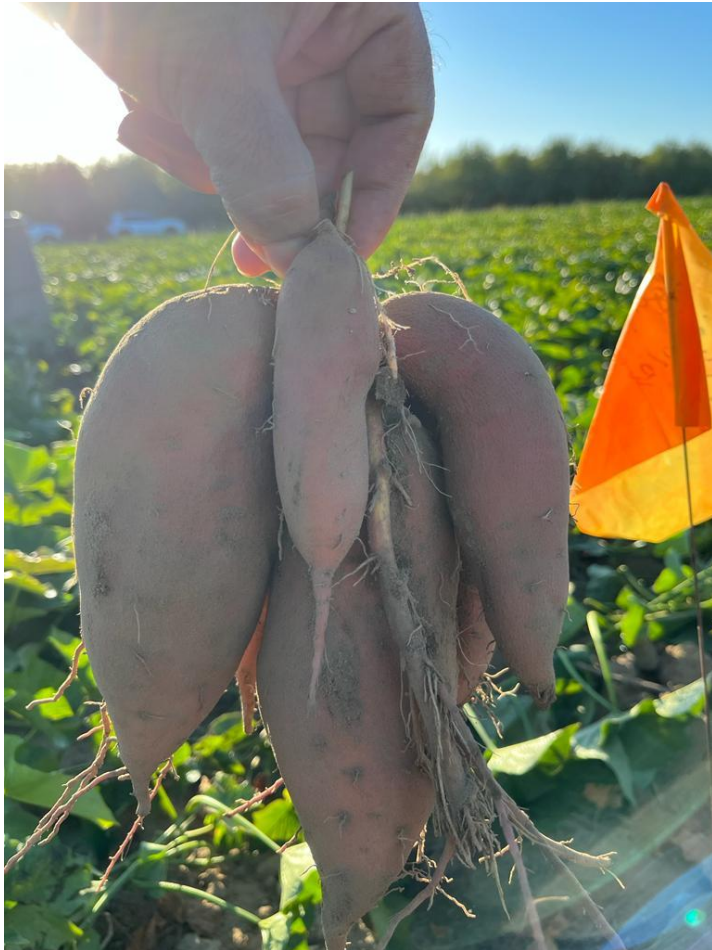


A. Green Mix promotes chlorophyll synthesis, enhancing leaf vigor, photosynthetic activity, and overall plant development.



Tuber No/Plant

Optimal:>6

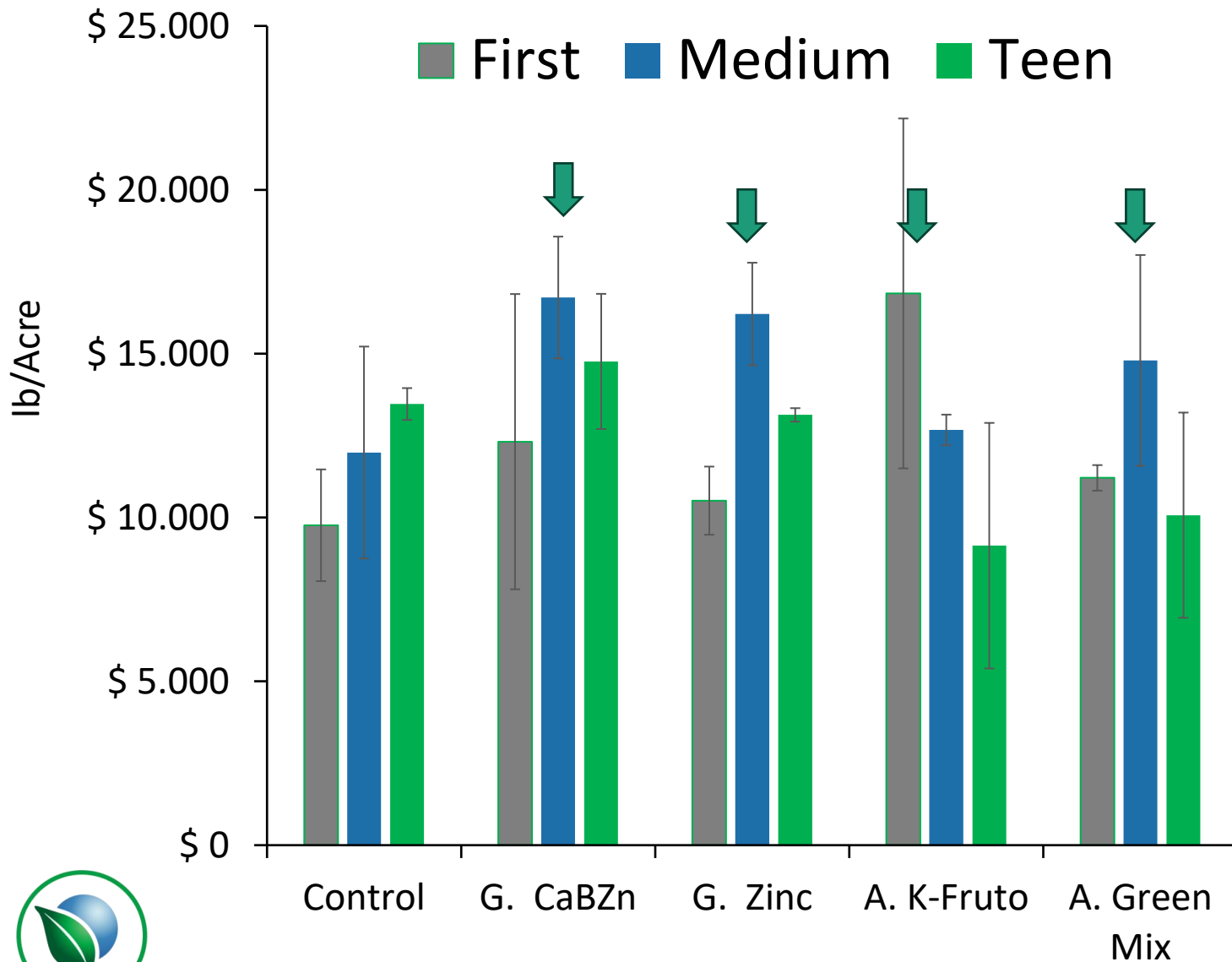


Glukoplant CalcioBZn promotes tuber differentiation and formation.

increase from 7% to 23%



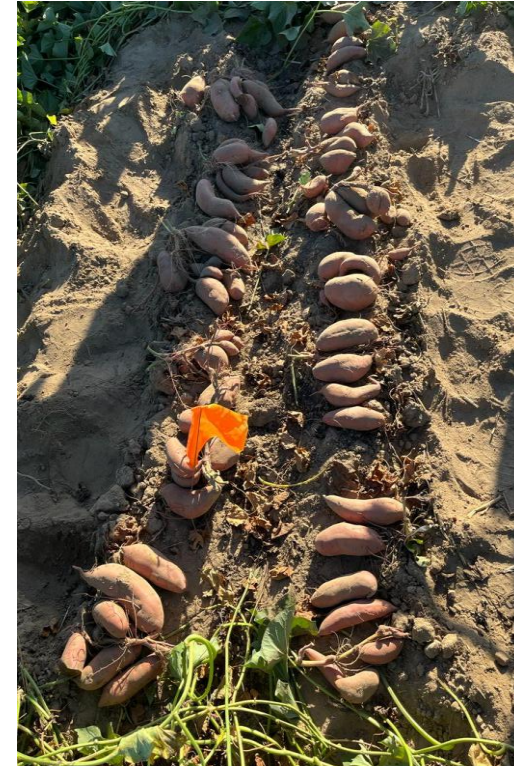
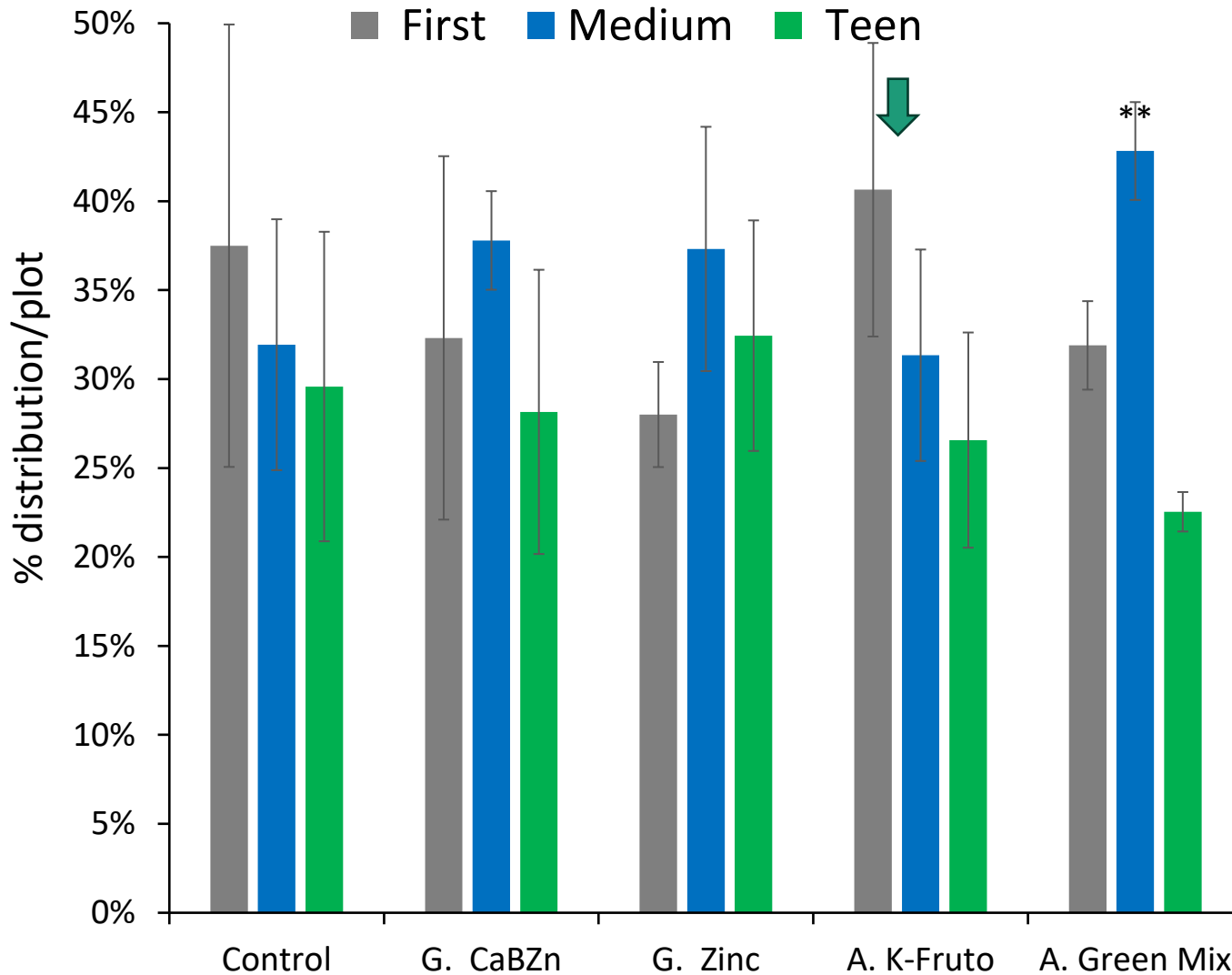
Quality Tuber FW lb/Acre



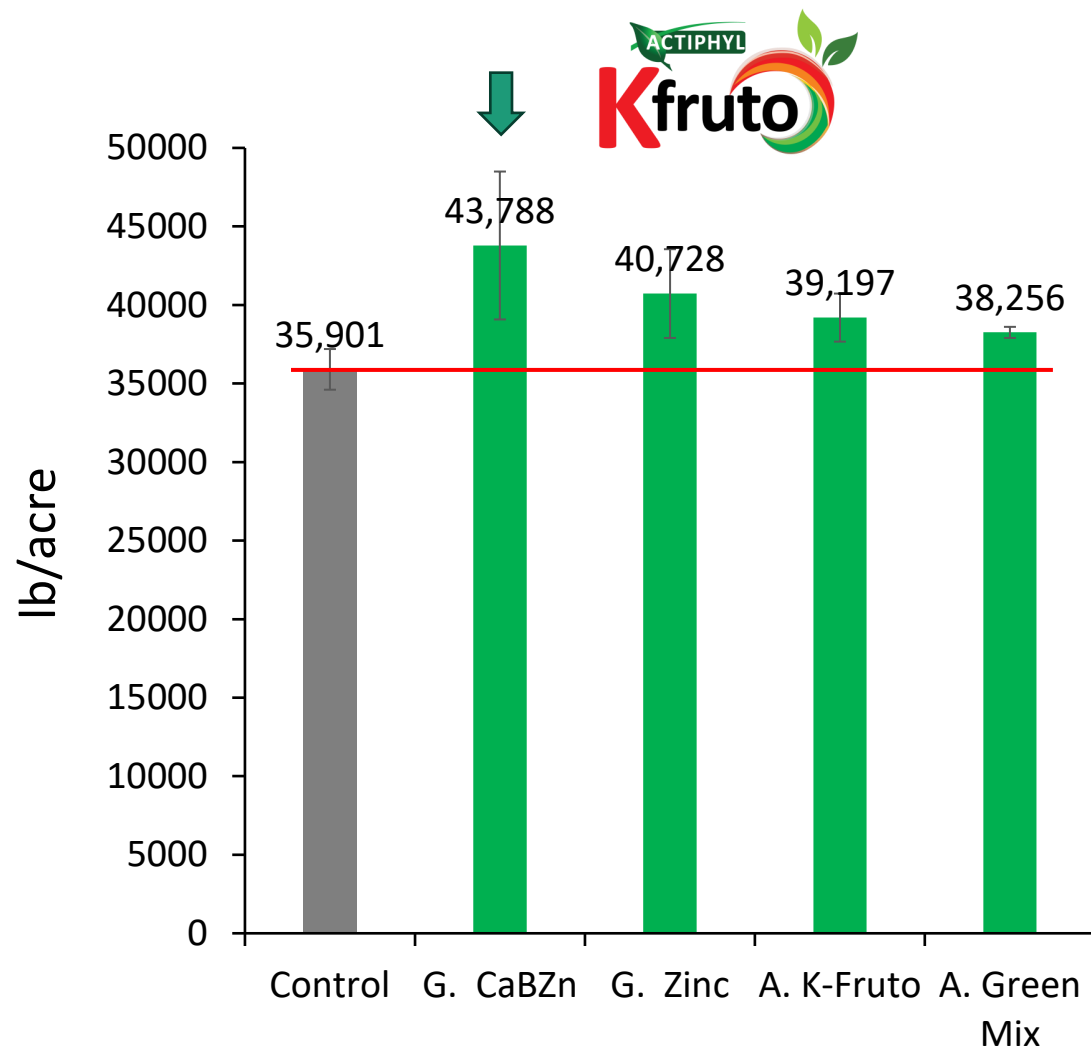
Increase up to:
First: 72%
Medium: 40%
Teen: 10%



Quality Tuber % distribution/Plot



Total FW lb/acre



Increase from 6% to 22%

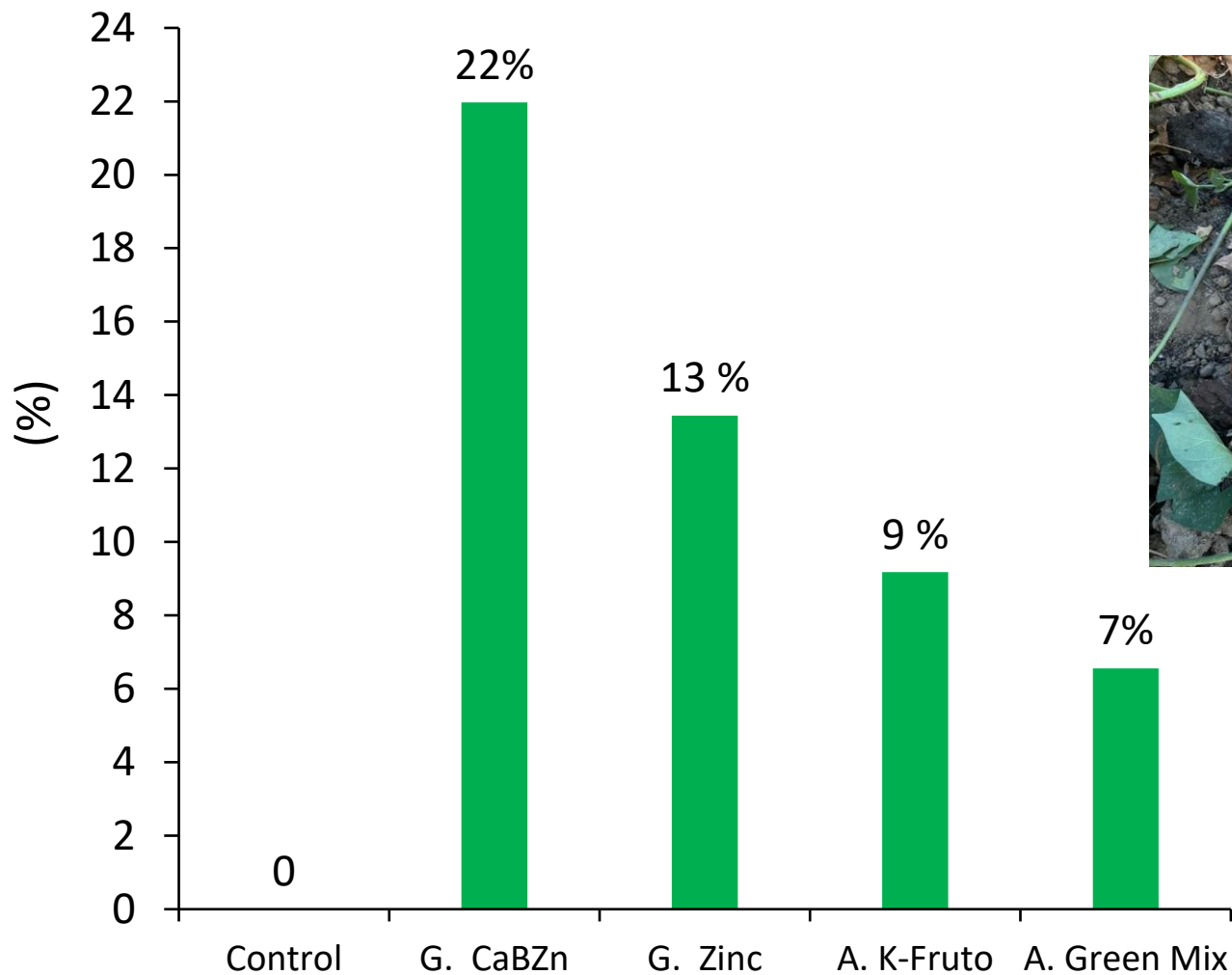


Actiphyl KFruto enhances tuber filling through its balanced nutrition, promoting greater carbohydrate accumulation in storage organs.

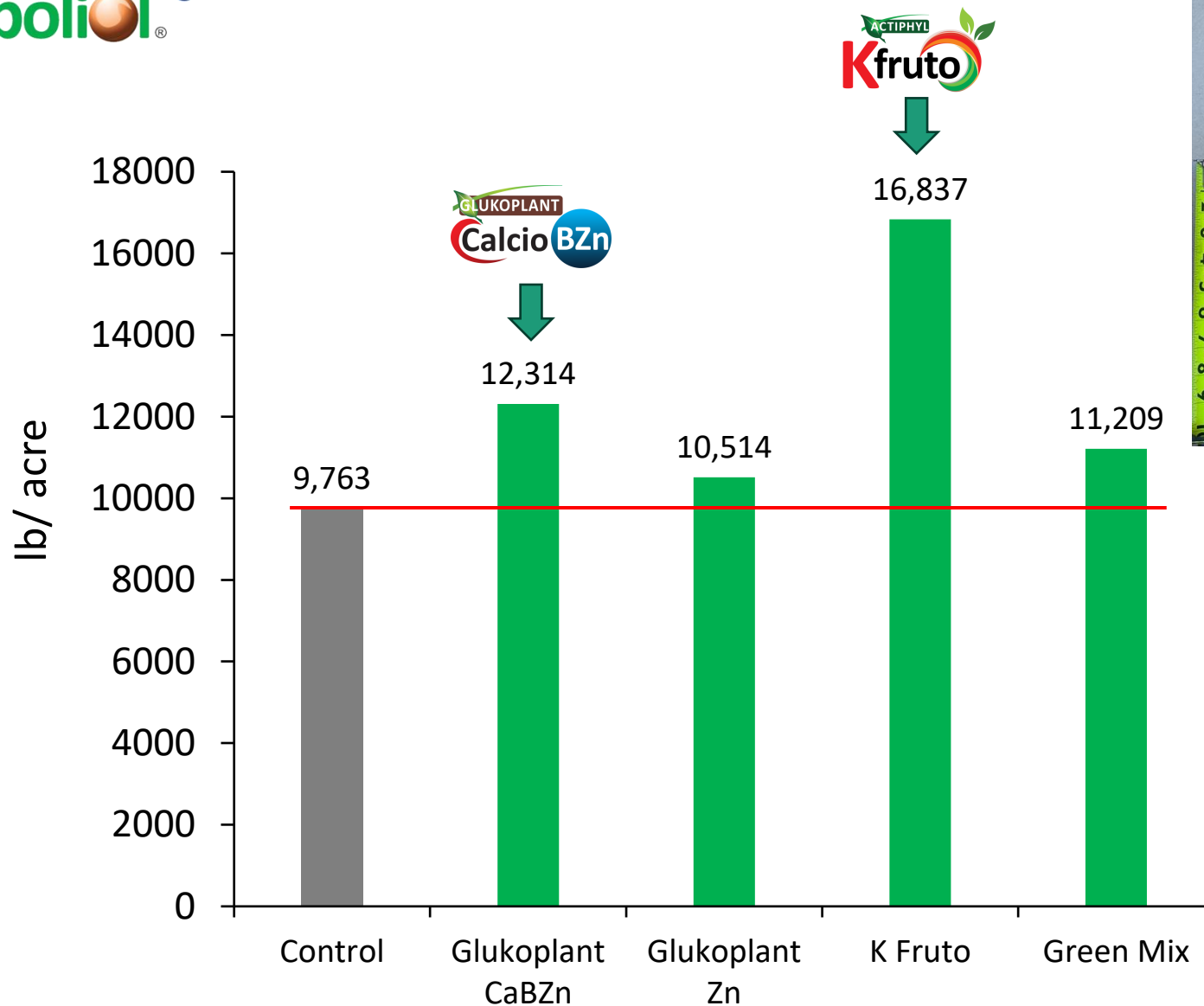


Relative increase- Total Yield (%)

GLUKOPLANT
Calcio BZn



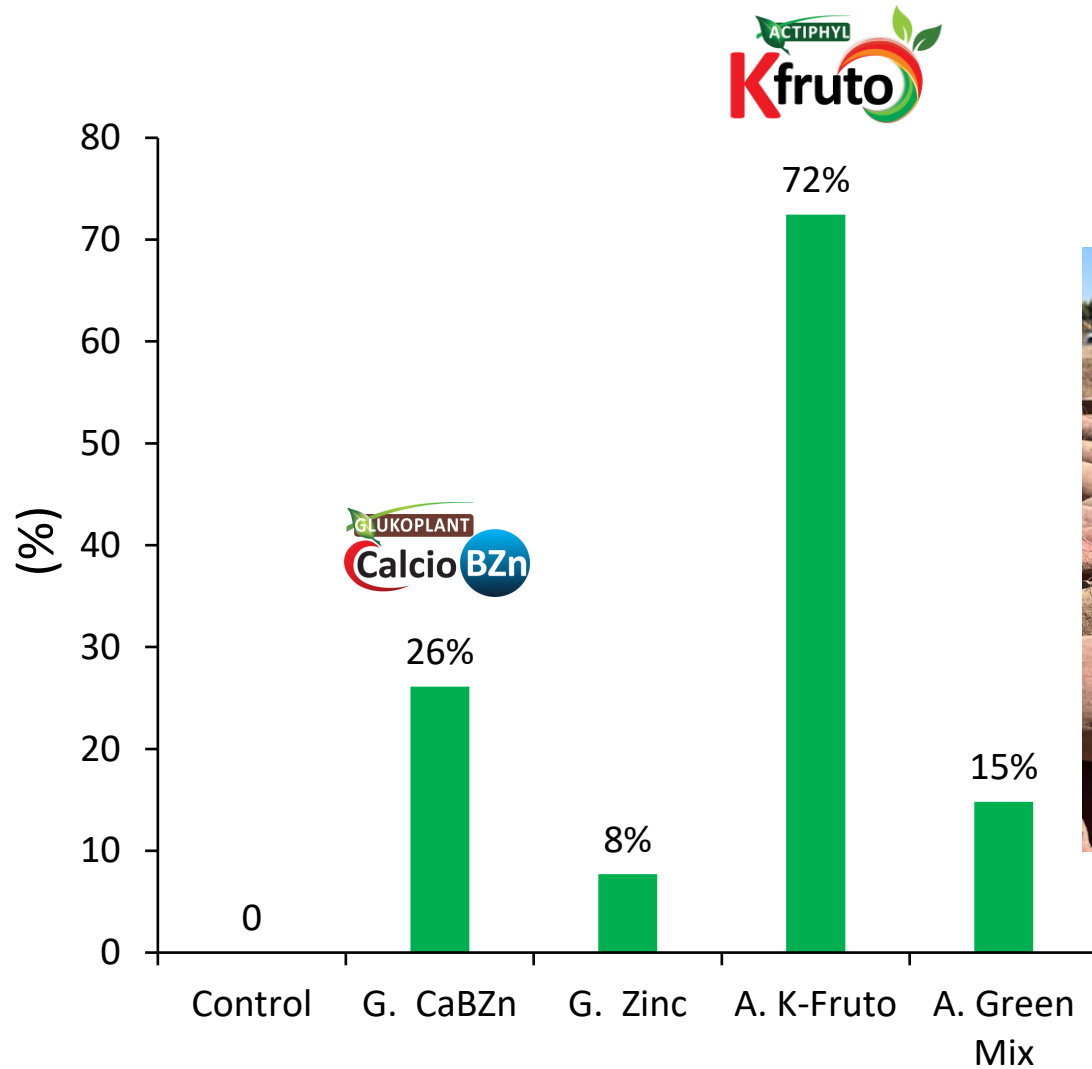
First lb/acre



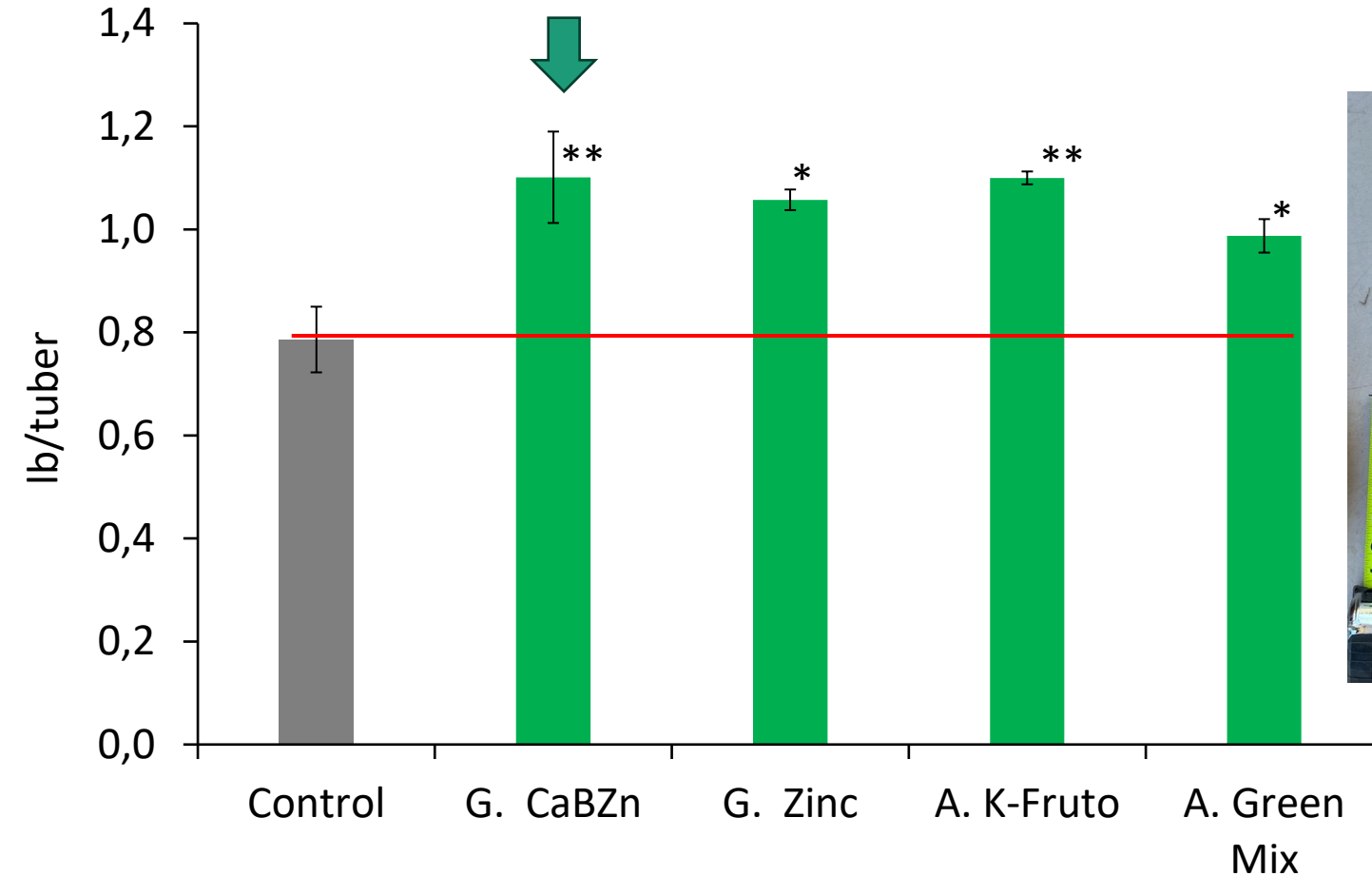
increase from 8 % to 72%



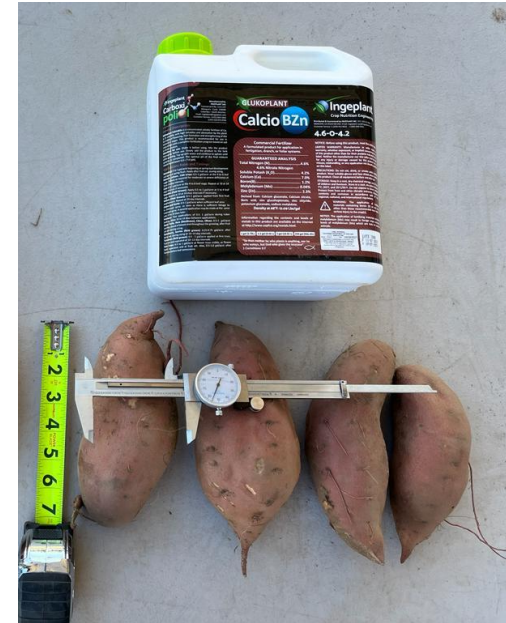
Relative increase- FIRST (%)



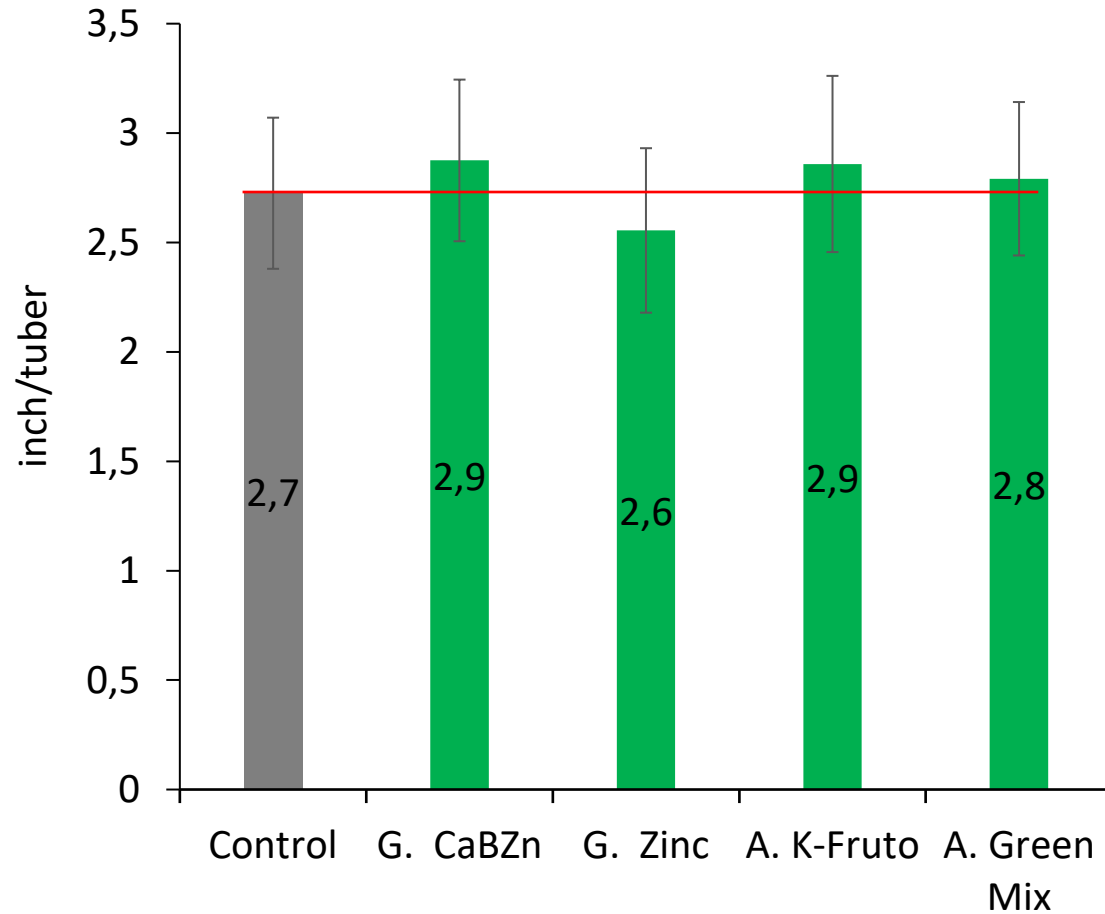
First Lb/tuber



increase from 25% to 40%



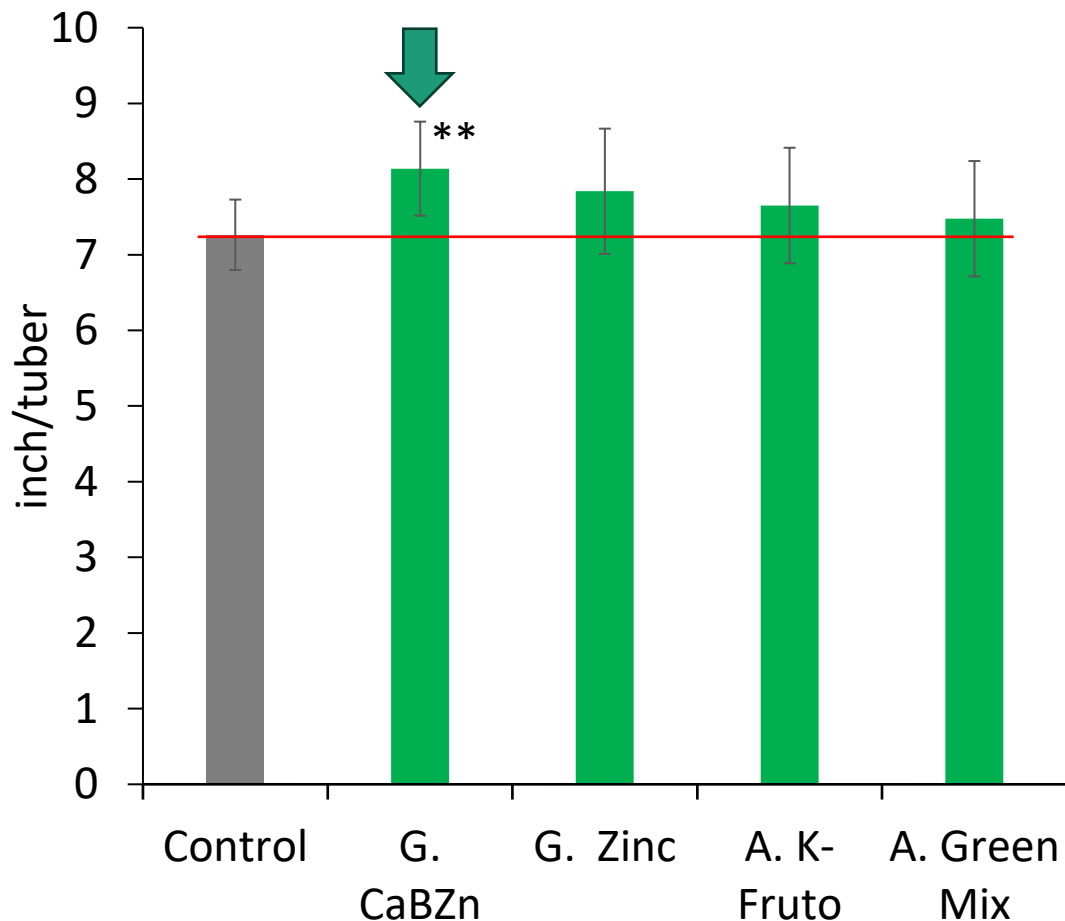
Ecuatorial Diameter inch/tuber first



Increase: 7,4%



Length inch/tuber first



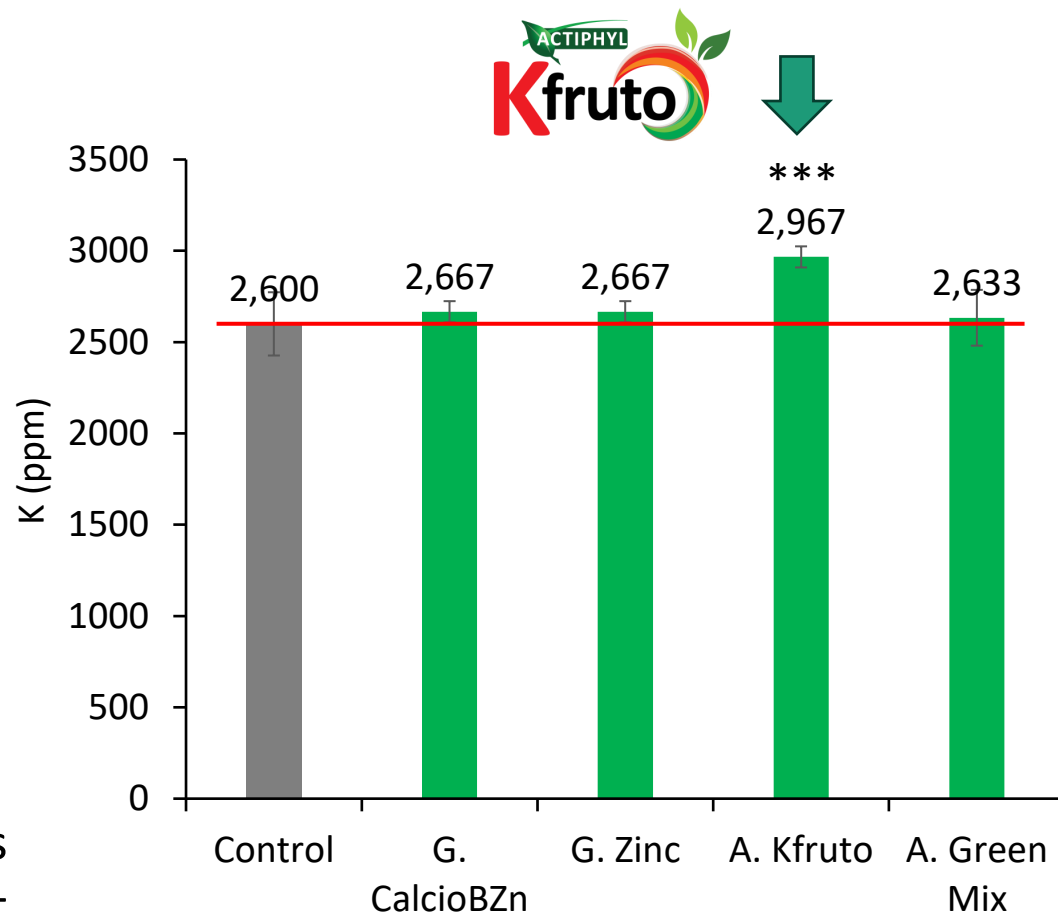
Increase: 11%



Potassium concentration in sweet potato.



Actiphyl KFruto improves potassium concentration in sweet potato through its **Carboxipoliol technology**, enhancing potassium uptake, mobility, and accumulation in storage organs.



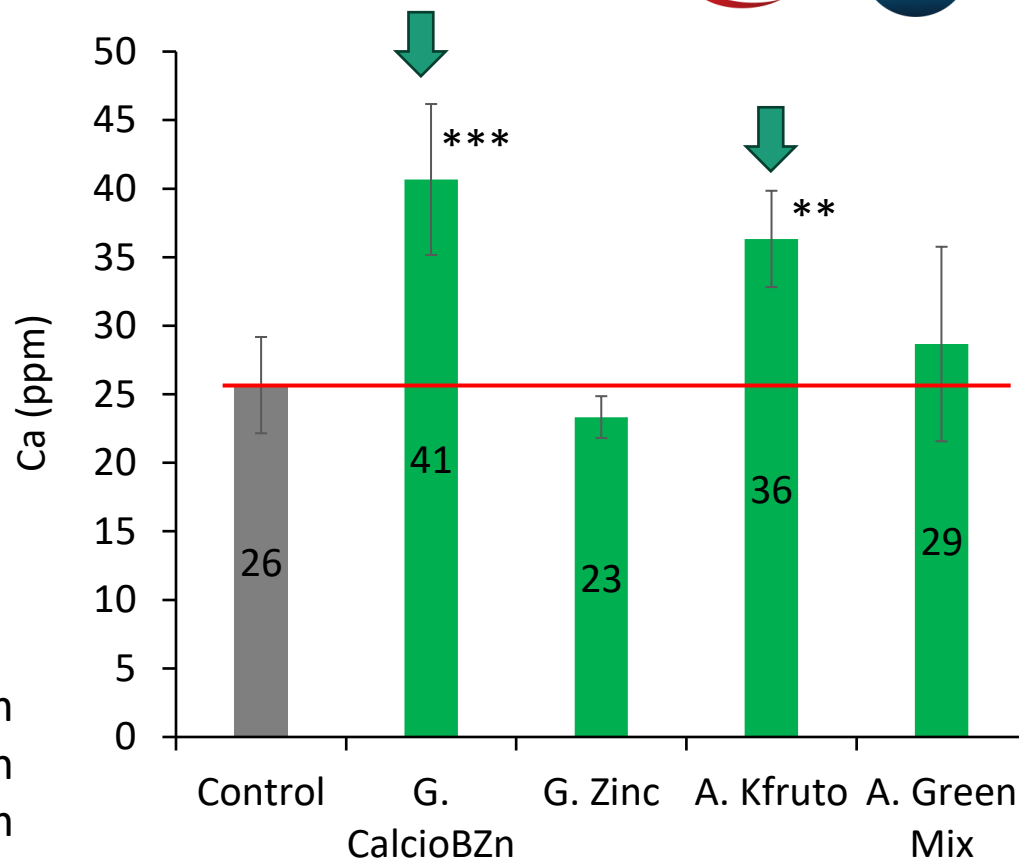
Increase From 14%



Calcium concentration in sweet potato.



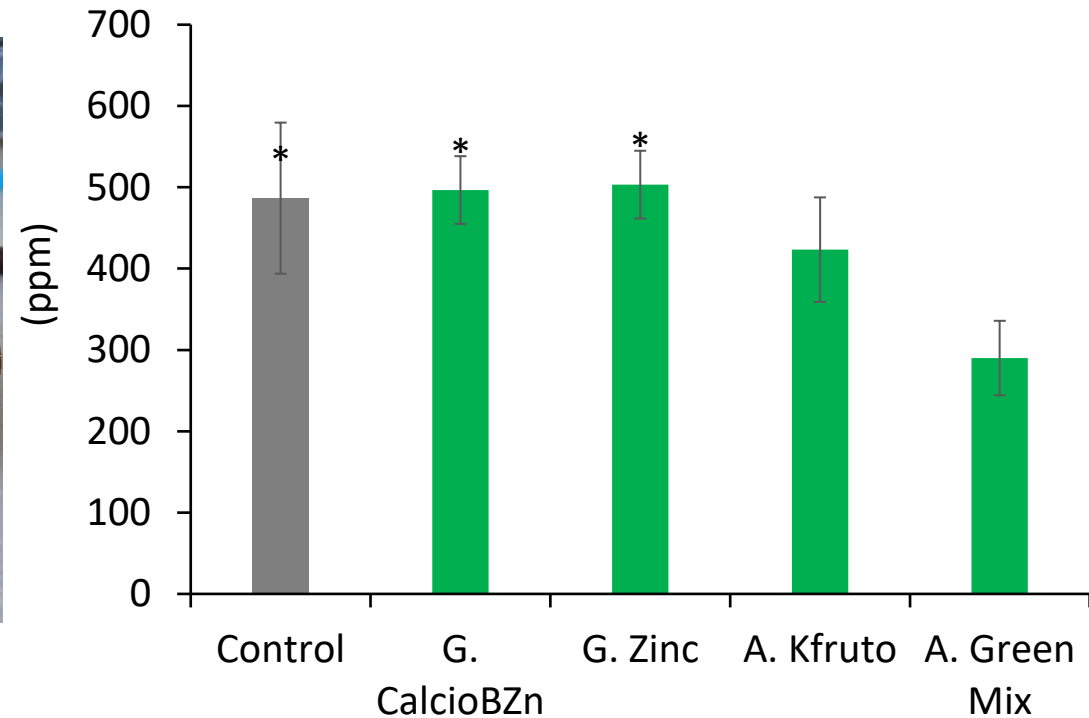
Glukoplant CalcioBZn improves calcium concentration in sweet potato through polyol **chelation**, enhancing calcium mobility and **accumulation** in storage organs.



Increase Ca : 58%



Nitrates concentration in sweet potato.



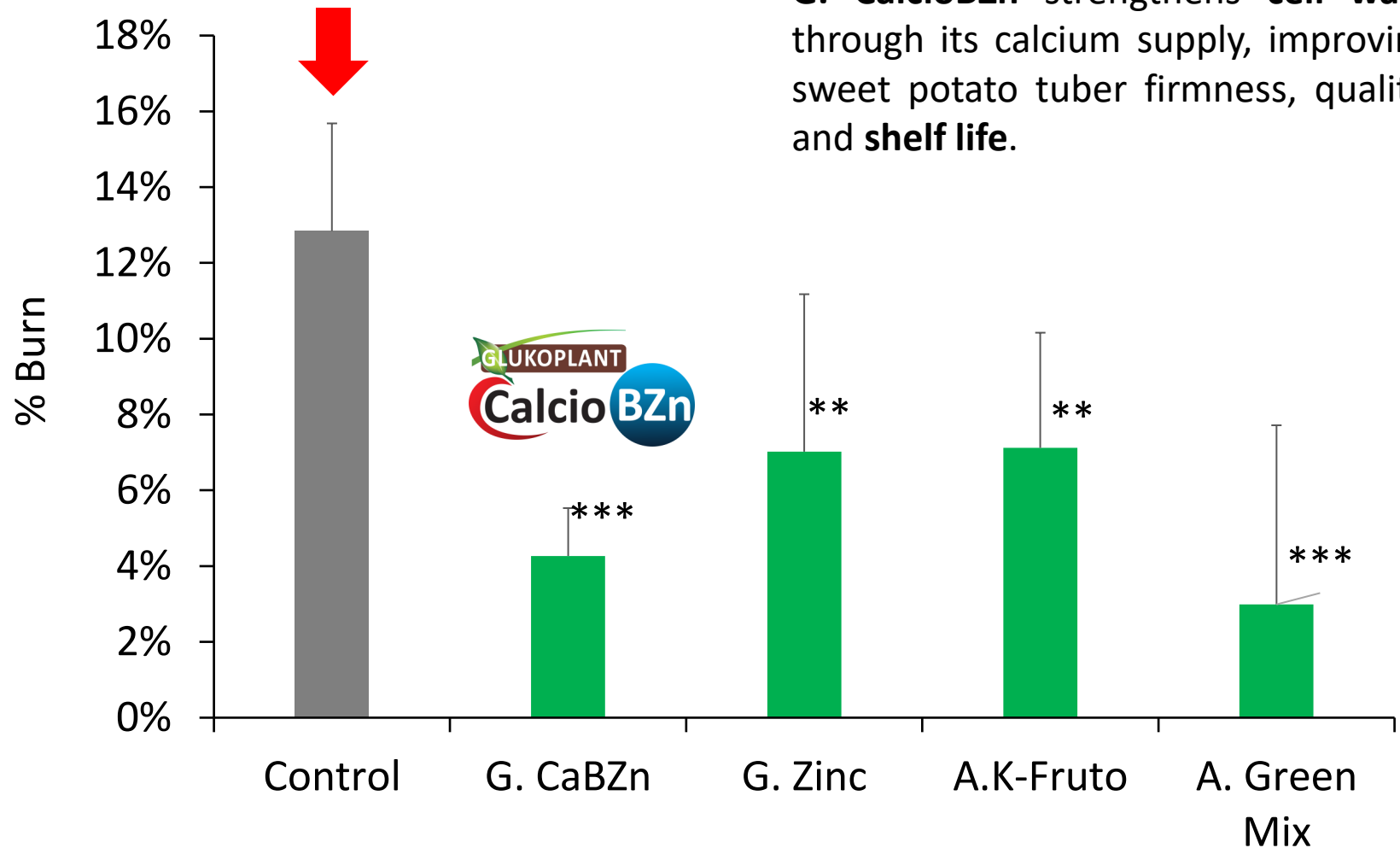
Increase from 5%





% Burn

G. CalcioBZn strengthens **cell walls** through its calcium supply, improving sweet potato tuber firmness, quality, and **shelf life**.

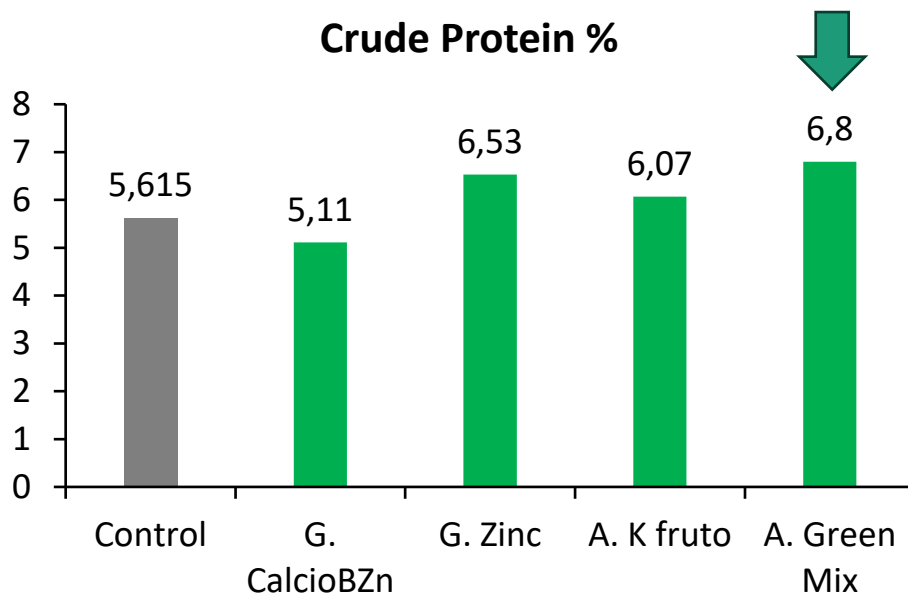


Increase from -44 % to -76%

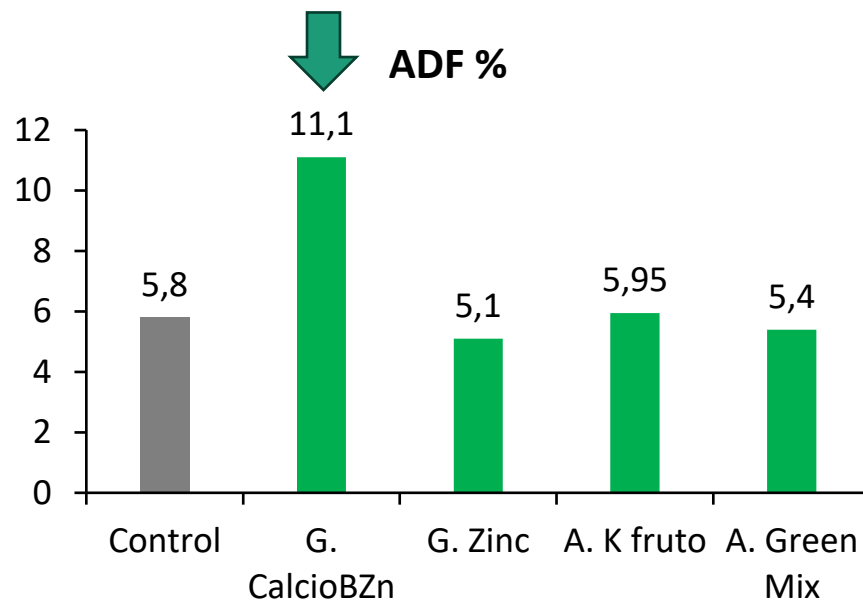
Plant tissue analysis



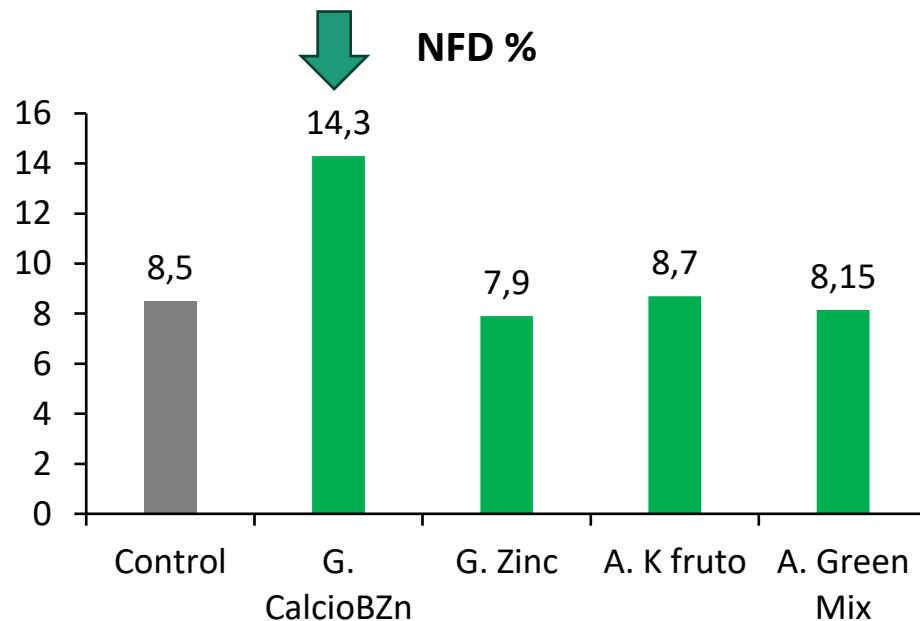
Crude Protein %



ADF %



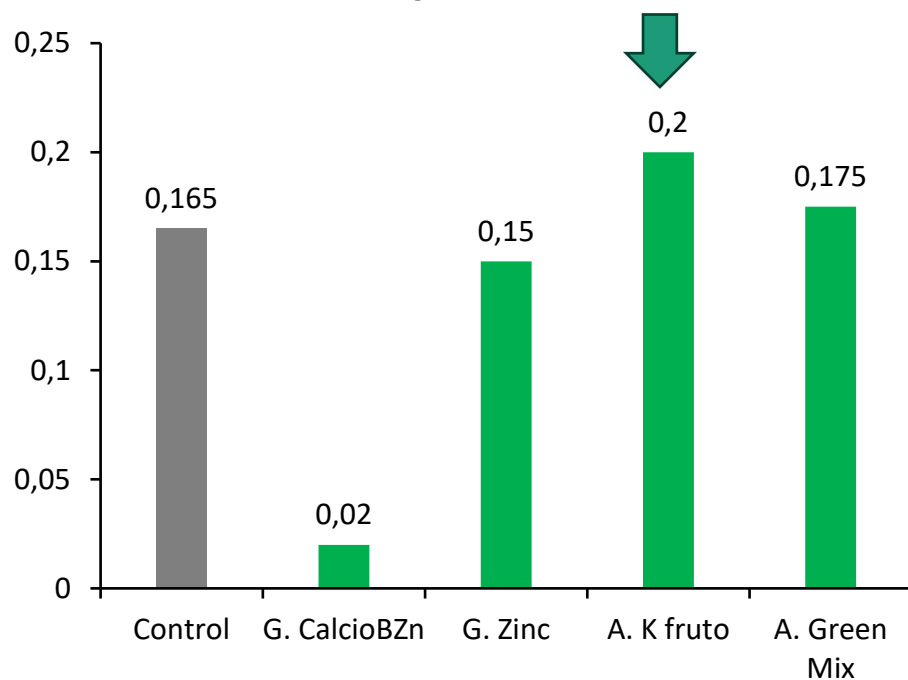
NDF %



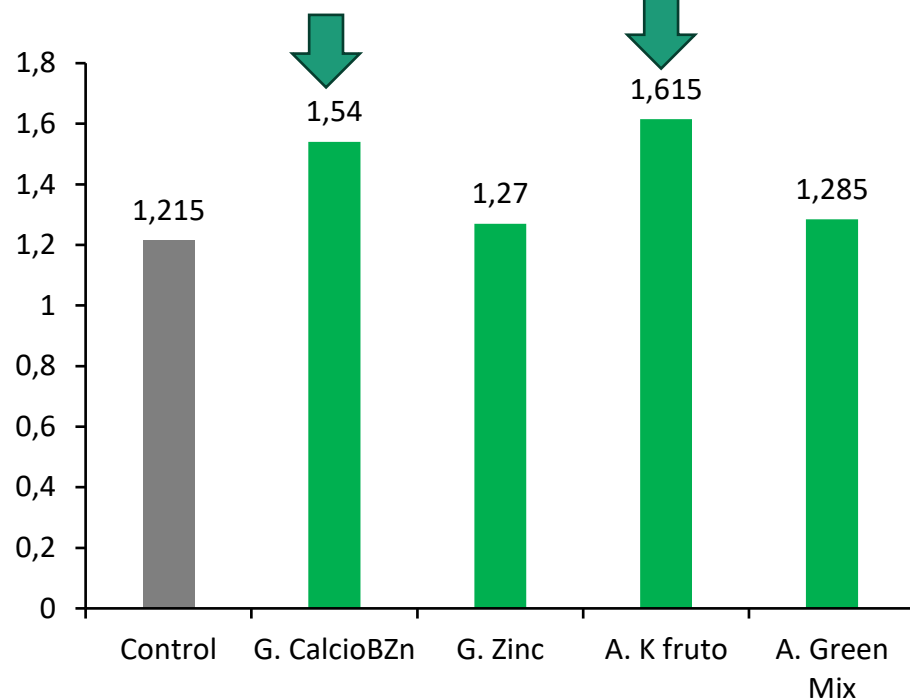
Increase up to:
Crude Protein: 21%
ADF: 91%
NDF: 68%

Plant tissue analysis

Phosphorus %



Potassium %



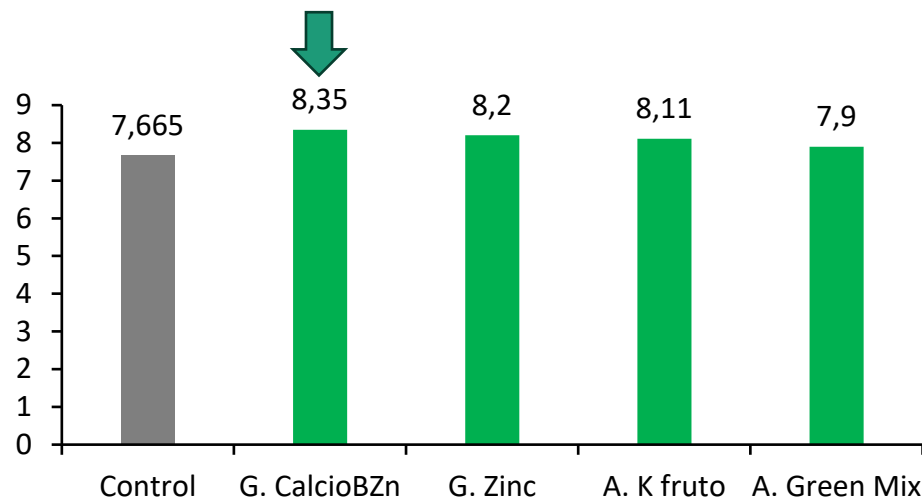
Increase up to:
Phosphorus : 21%
Potassium : 33 %



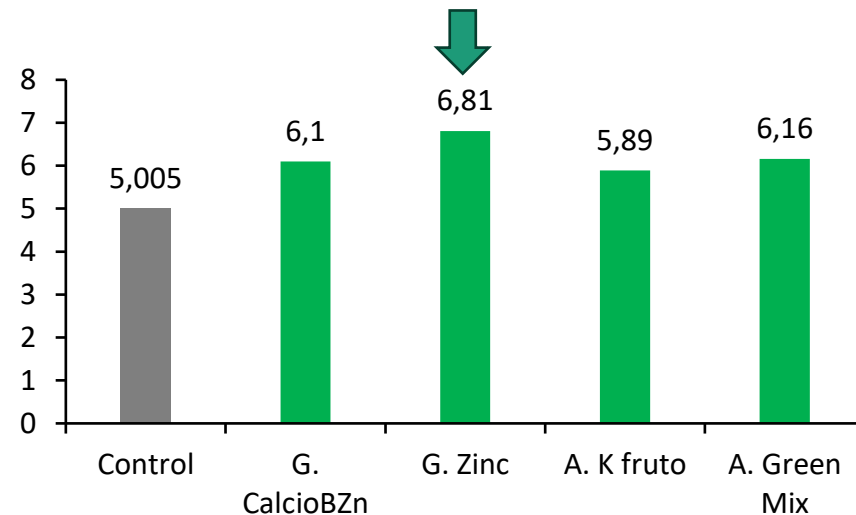
Plant tissue analysis



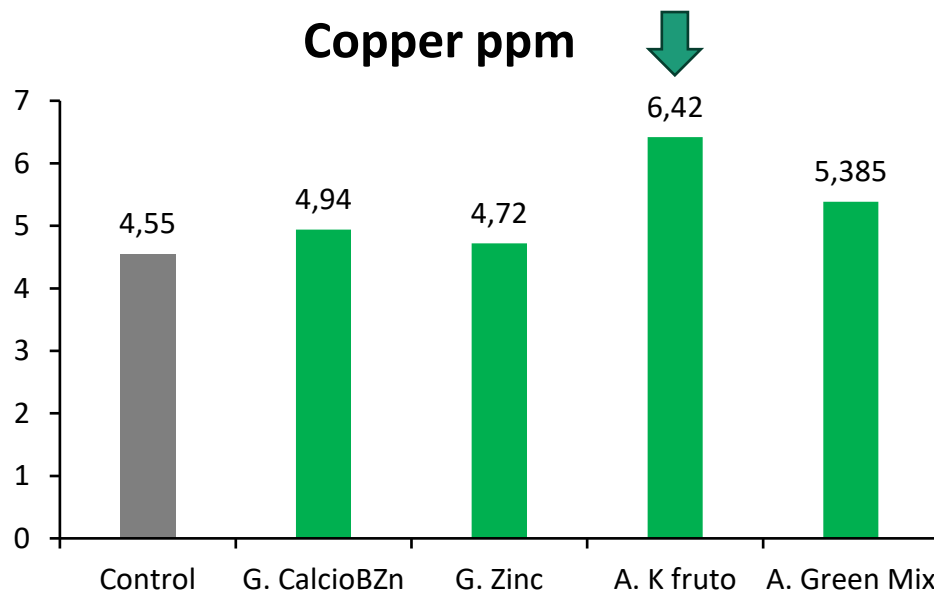
Manganese ppm



Zinc ppm



Copper ppm



Increase up to:
Manganese: 9%
Zinc: 36%
Cooper: 41 %

Analysis

Treatment	Income/acre JUMBO - US	Income/acre FIRST-US	Income/ acre MEDIUM - US	Income/acre TINY - US	Income /acre TOTAL - US	Difference - US
Control	\$ 12,498	\$ 244,072	\$ 215,661	\$ 134,630	\$ 606,862	
Glukoplant CaBZn		\$ 307,843	\$ 300,820	\$ 147,621	\$ 756,284	\$ 149,422
Glukoplant Zinc	\$ 15,757	\$ 262,840	\$ 291,745	\$ 131,306	\$ 701,647	\$ 94,784
A. Green Mix	\$ 21,112	\$ 280,217	\$ 267,528	\$ 101,173	\$ 670,030	\$ 63,168
A. K-Fruto		\$ 420,912	\$ 264,771	\$ 92,240	\$ 777,923	\$ 171,061

Quality Tuber	Increase up to
Jumbo	75%
First	72%
Medium	39%
Tiny	10%

Treatment	Total Increase up to
G. CaBZn	28%
G. Zinc	16%
A. K-Fruto	32%
A. Green Mix	10%

Conclusions

- The best treatment was **Glukoplant CalcioBZn** observing increases in Tuber No/Plant (23%), Total FW lb/acre (22%), Length inch/tuber first (11%) , %Burn (-66%), and SAP-Calcium (58%).
- The **Actiphyl K-Fruto** treatment presented increases in the variables First lb/acre (72%) , First Lb/tuber (40%), and SAP- Potassium (14%).
- Treatments A. Kfruto and G. CalcioBZn increased 32% and 28%, respectively, the revenue per acre in Japanese sweetpotato.





Thank You