

**2020**

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**MARCO RESEARCH TRIALS**

# 2020 MARCO TRIALS

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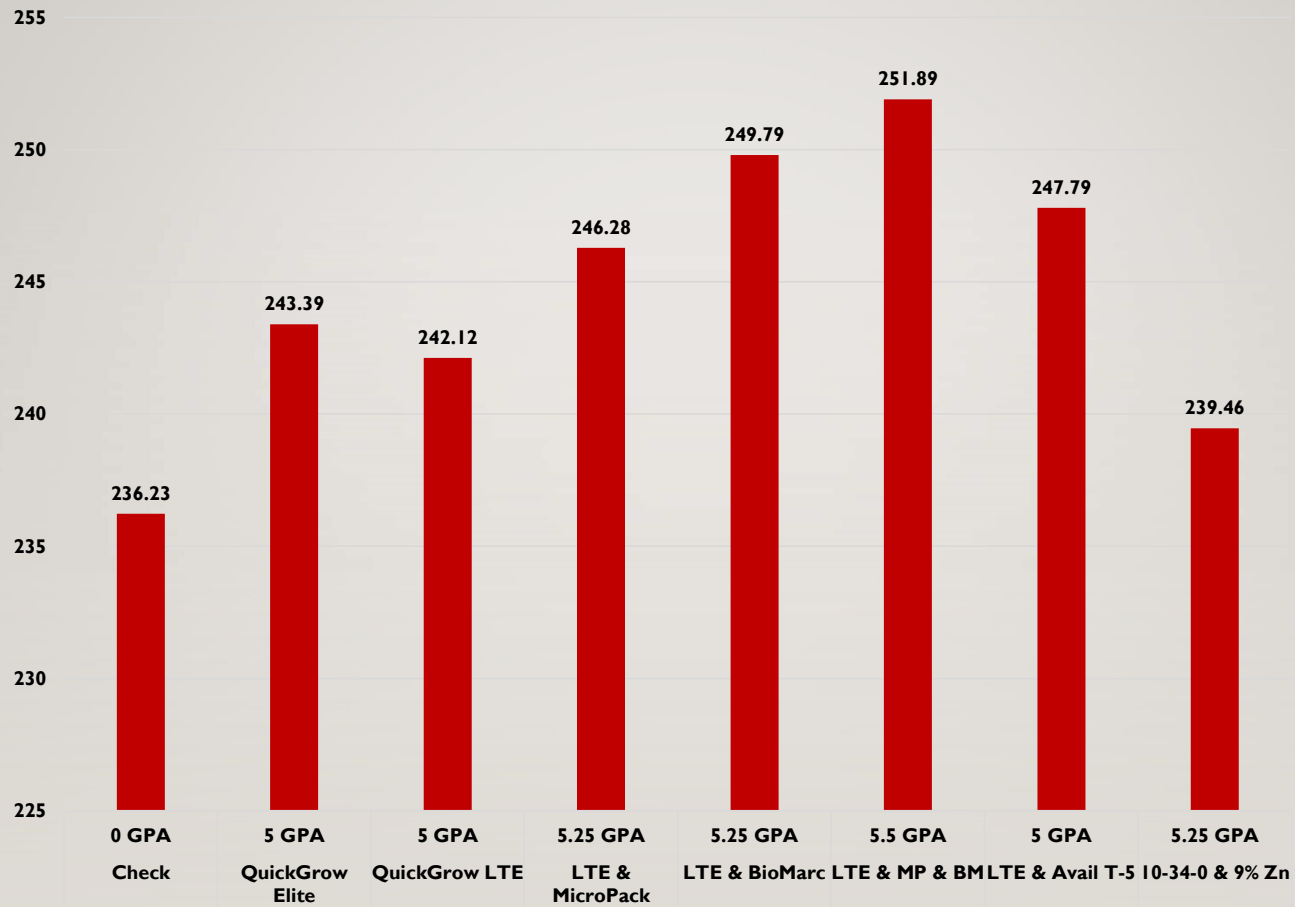


**QUICKGROW**

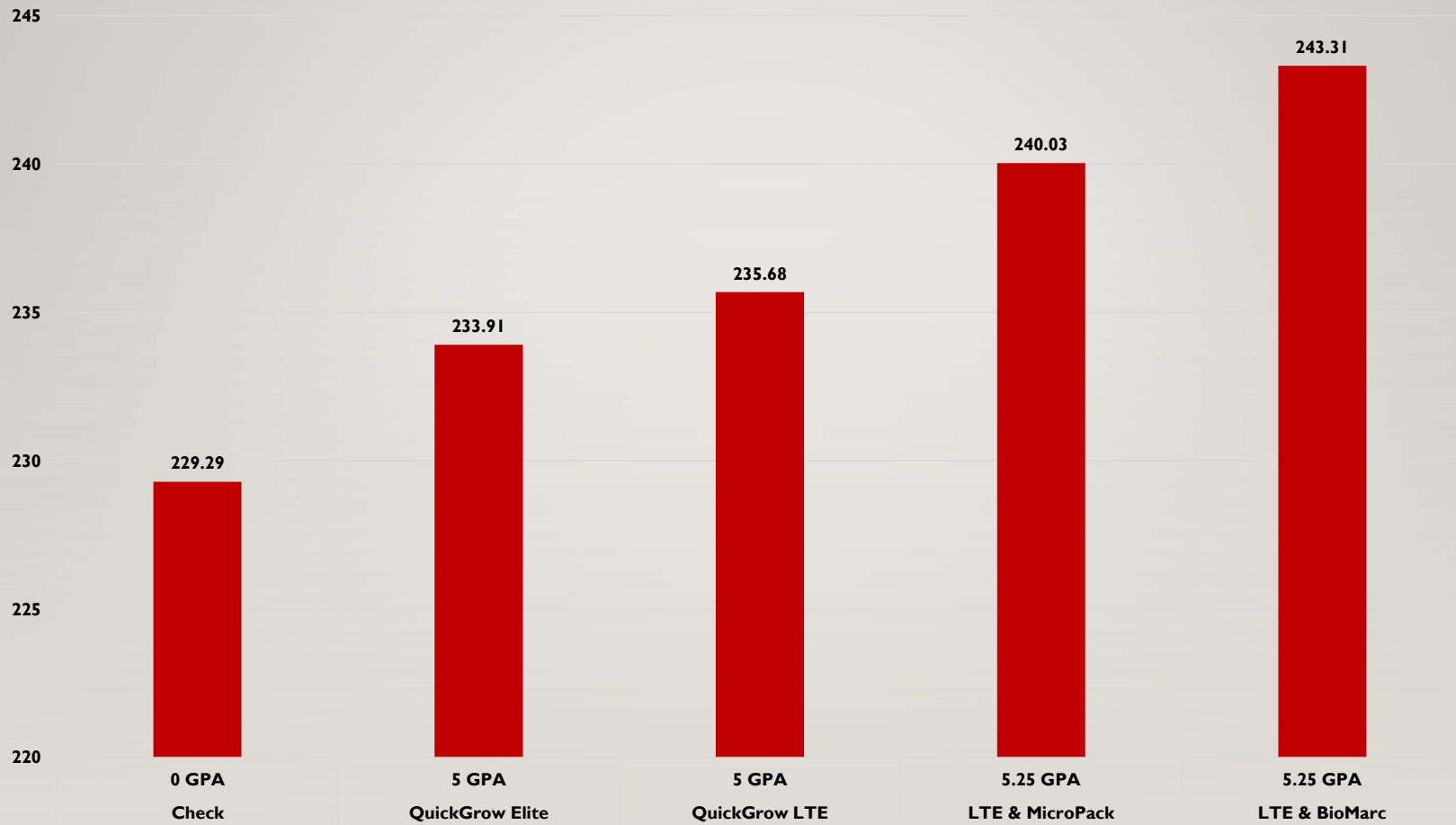
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**CORN**

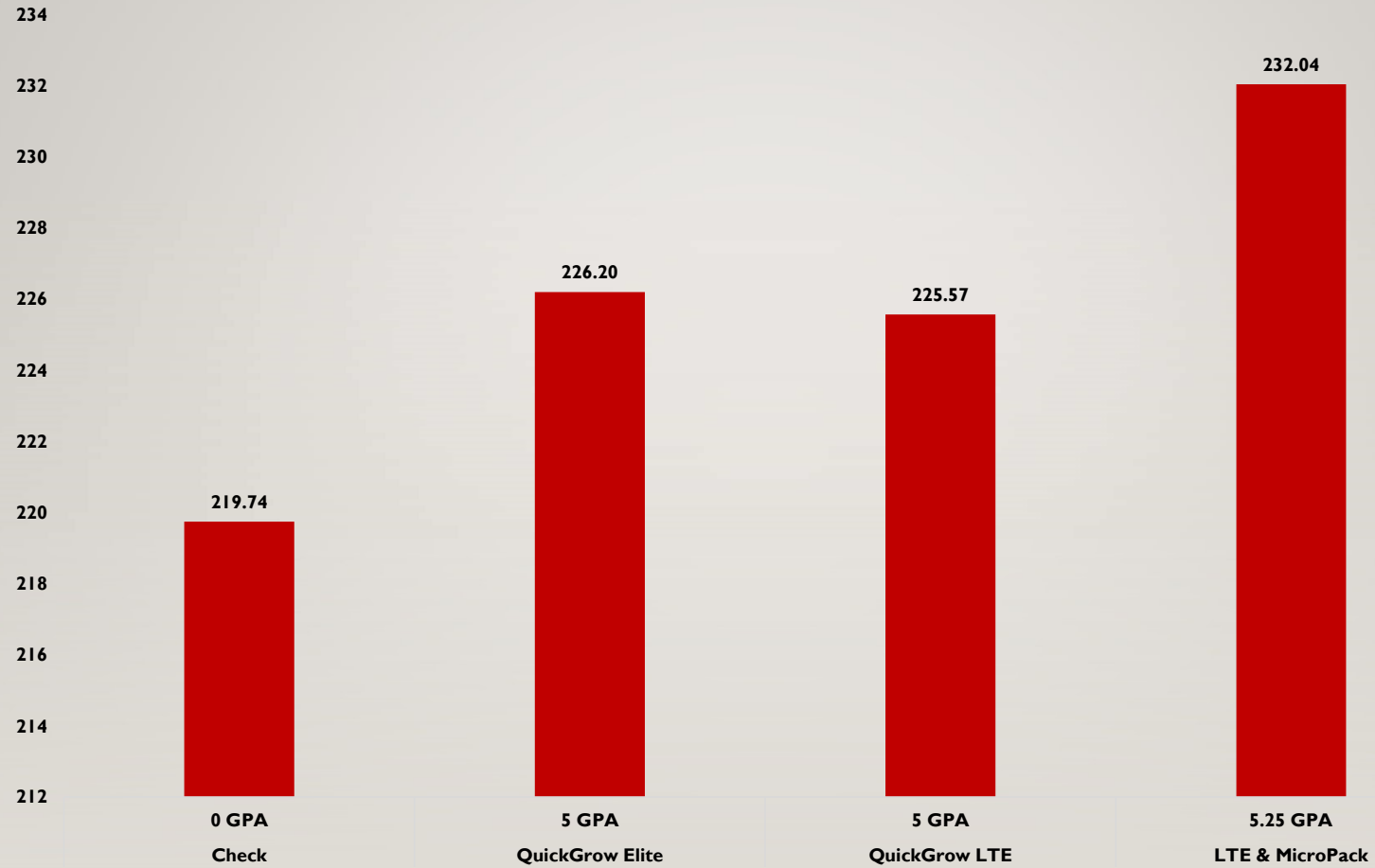
**2020 Agri-Tech Consulting  
Corn.....QuickGrow In-Furrow Trials  
4 Replications**



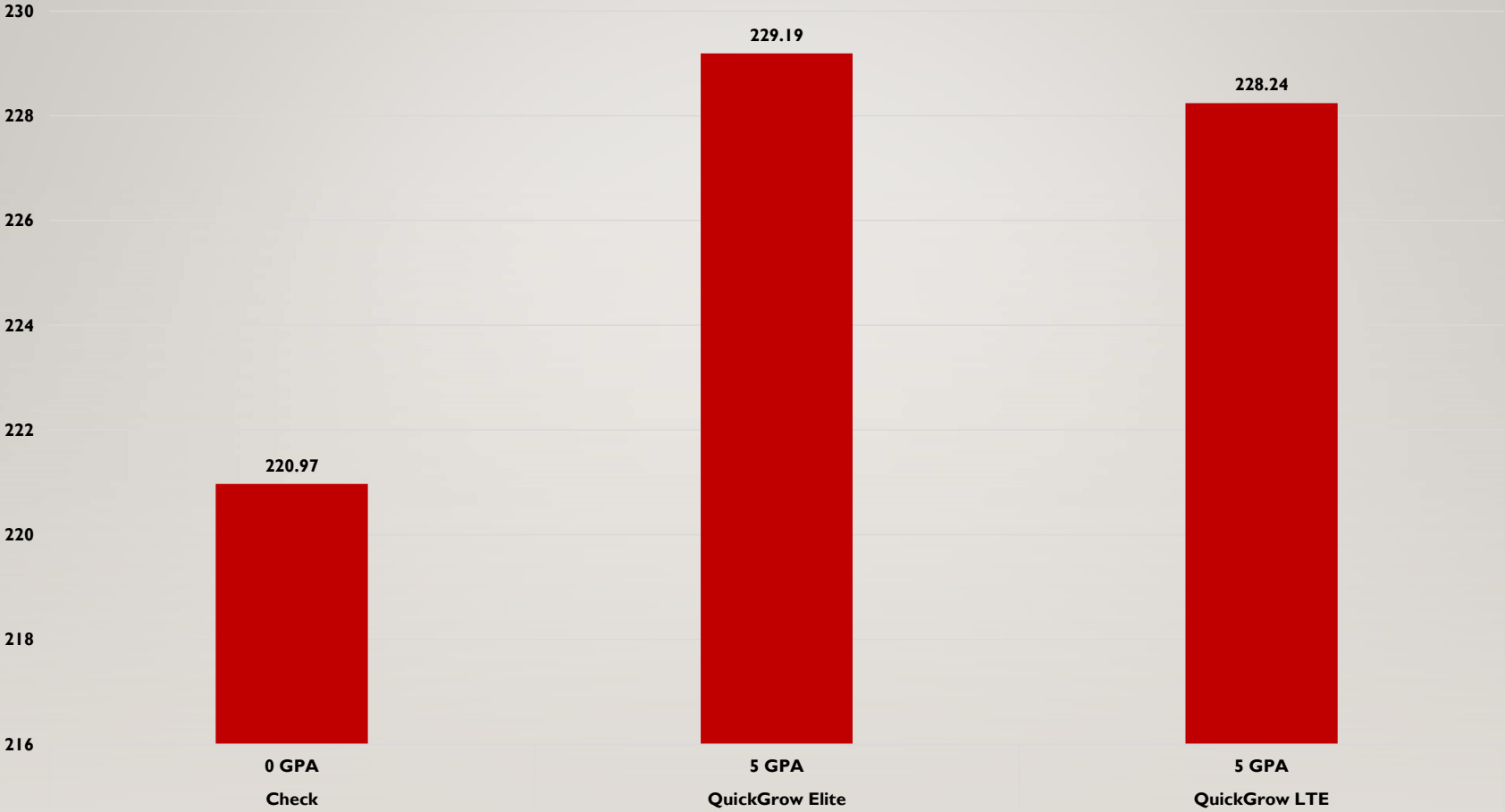
**2019 - 2020 Agri-Tech Consulting  
Corn.....QuickGrow In-Furrow Trials  
4 Replications**



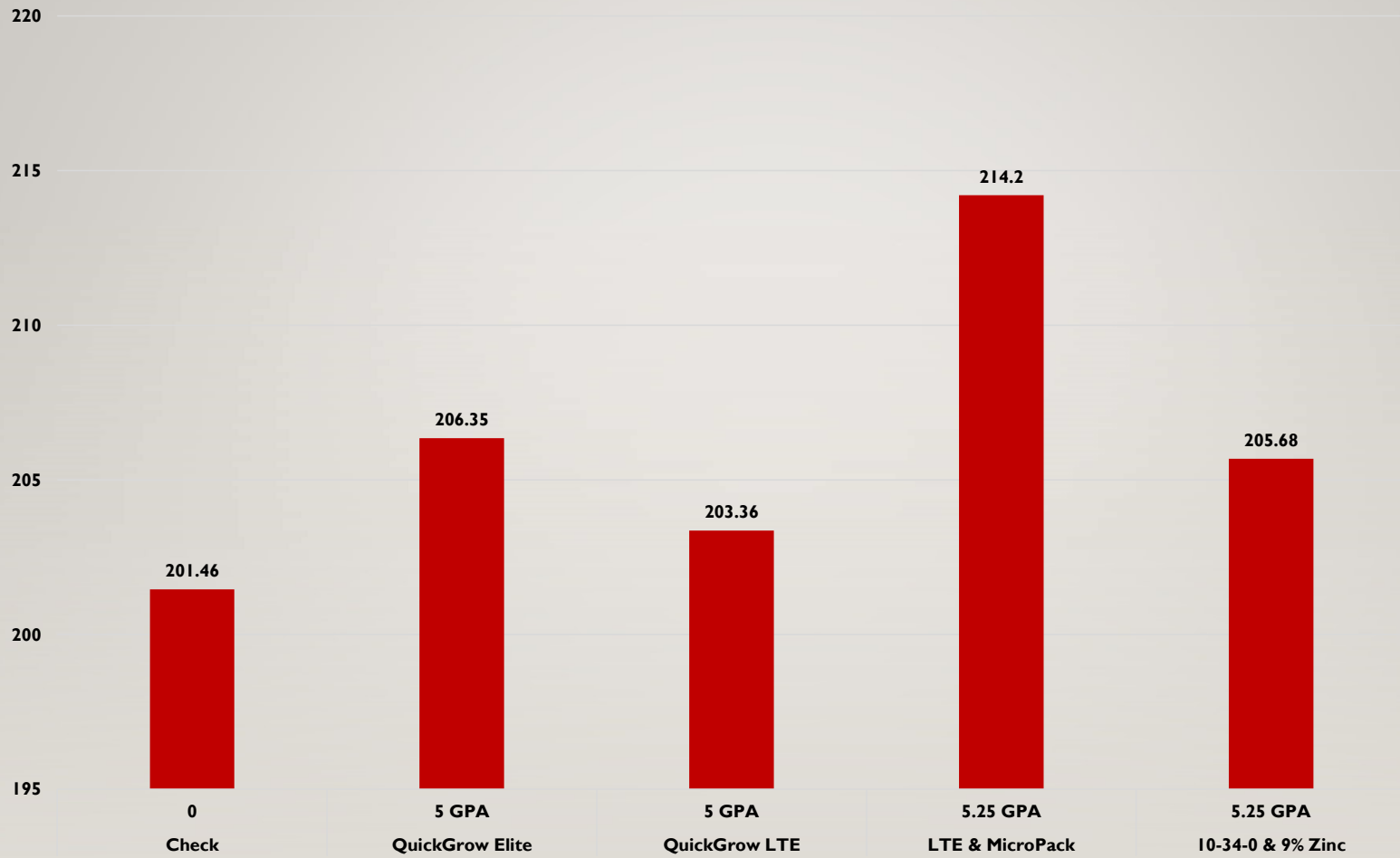
**2017 2020 Agri-Tech Consulting  
Corn.....QuickGrow In-Furrow Trials  
4 Replications**



**2016 - 2020 Agri-Tech Consulting  
Corn.....QuickGrow In-Furrow Trials  
4 Replications**

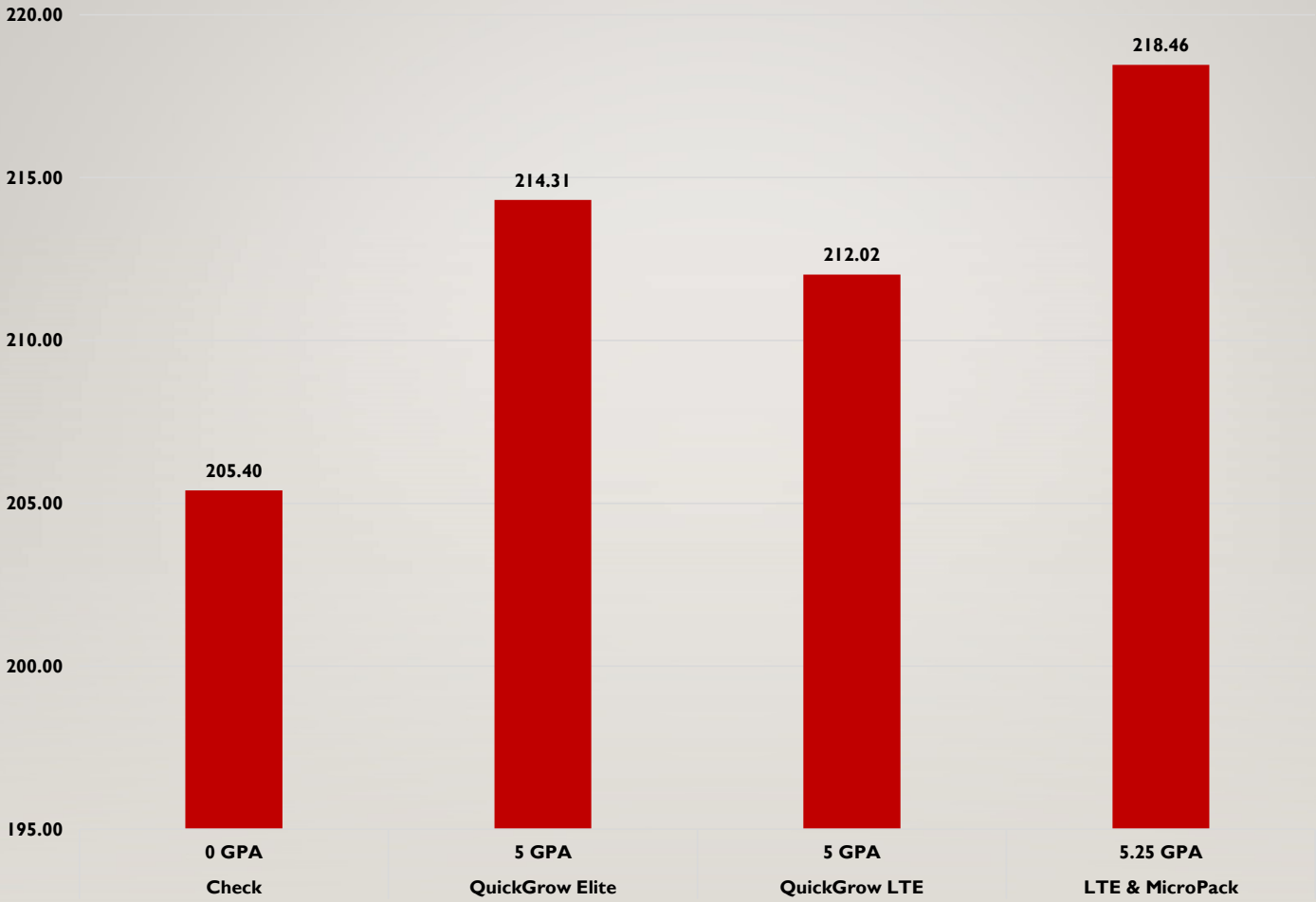


**2020 CropSmith - Farmer City, IL  
Corn.....QuickGrow In-Furrow Side By Side**

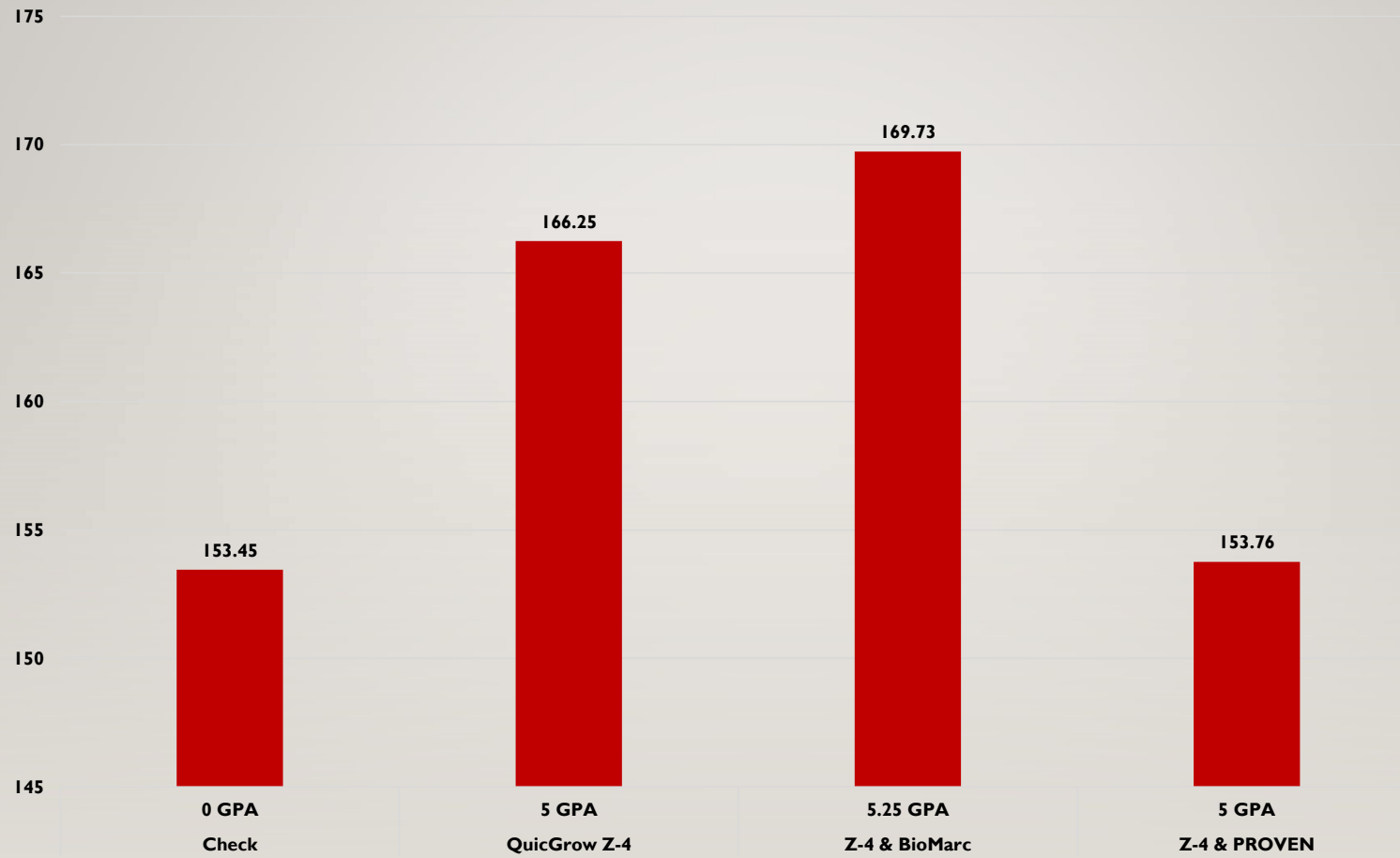




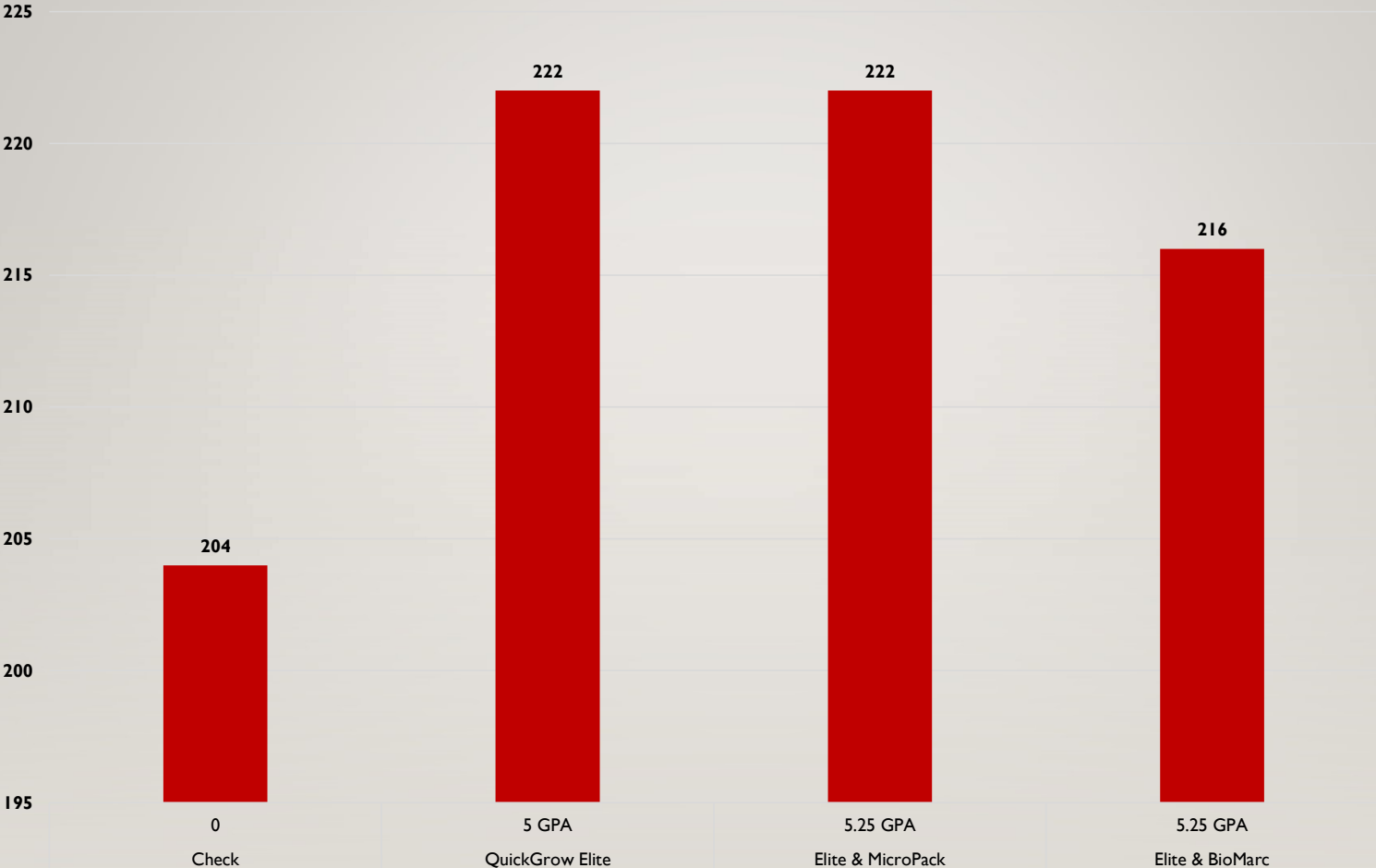
**2019 - 2020 CropSmith - Farmer City, IL  
Corn.....QuickGrow In-Furrow Trial Average**



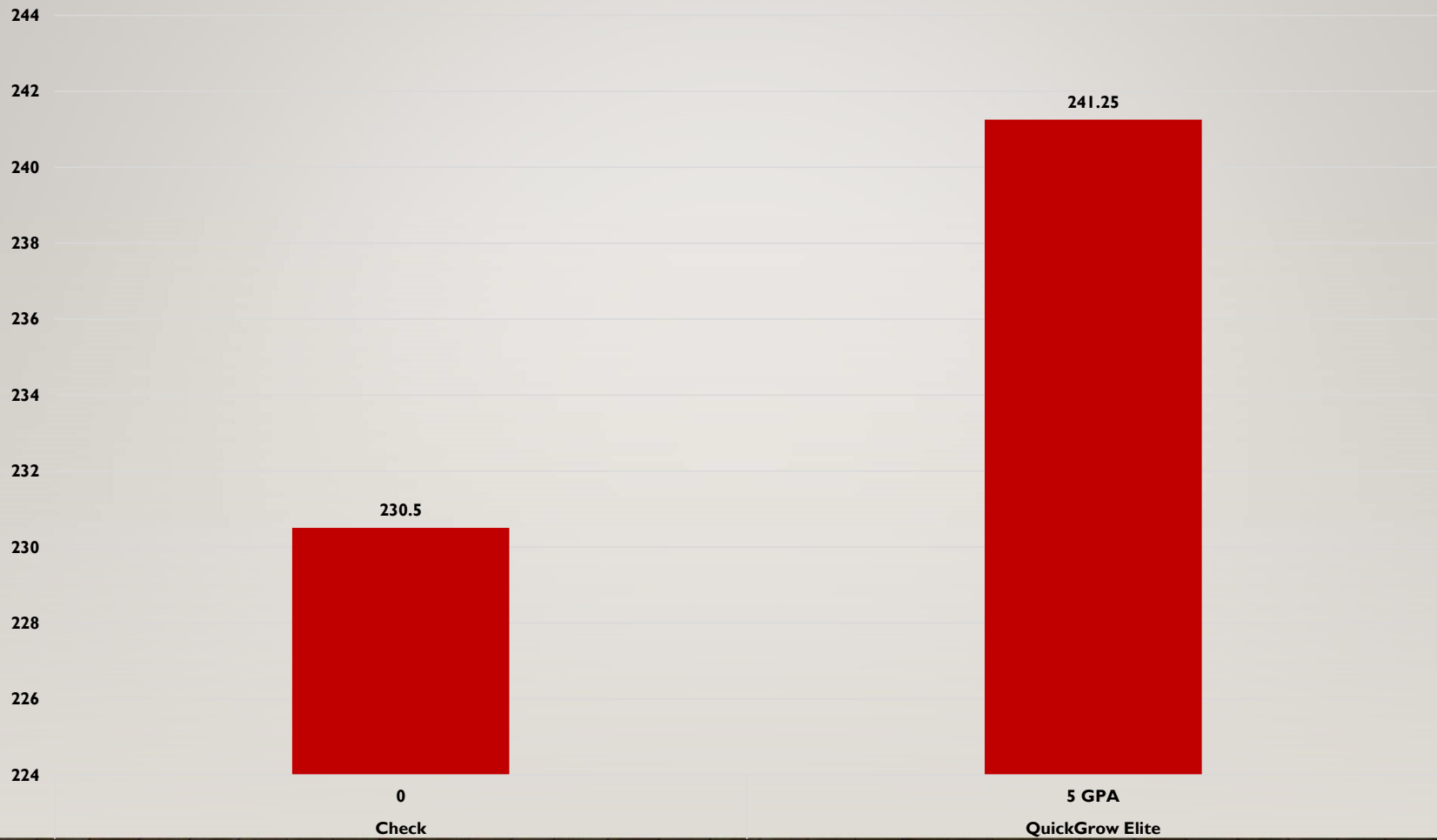
**2020 CropSmith - Farmer City, IL  
Corn.....QuickGrow Z-4 In-Furrow  
4 Replications**



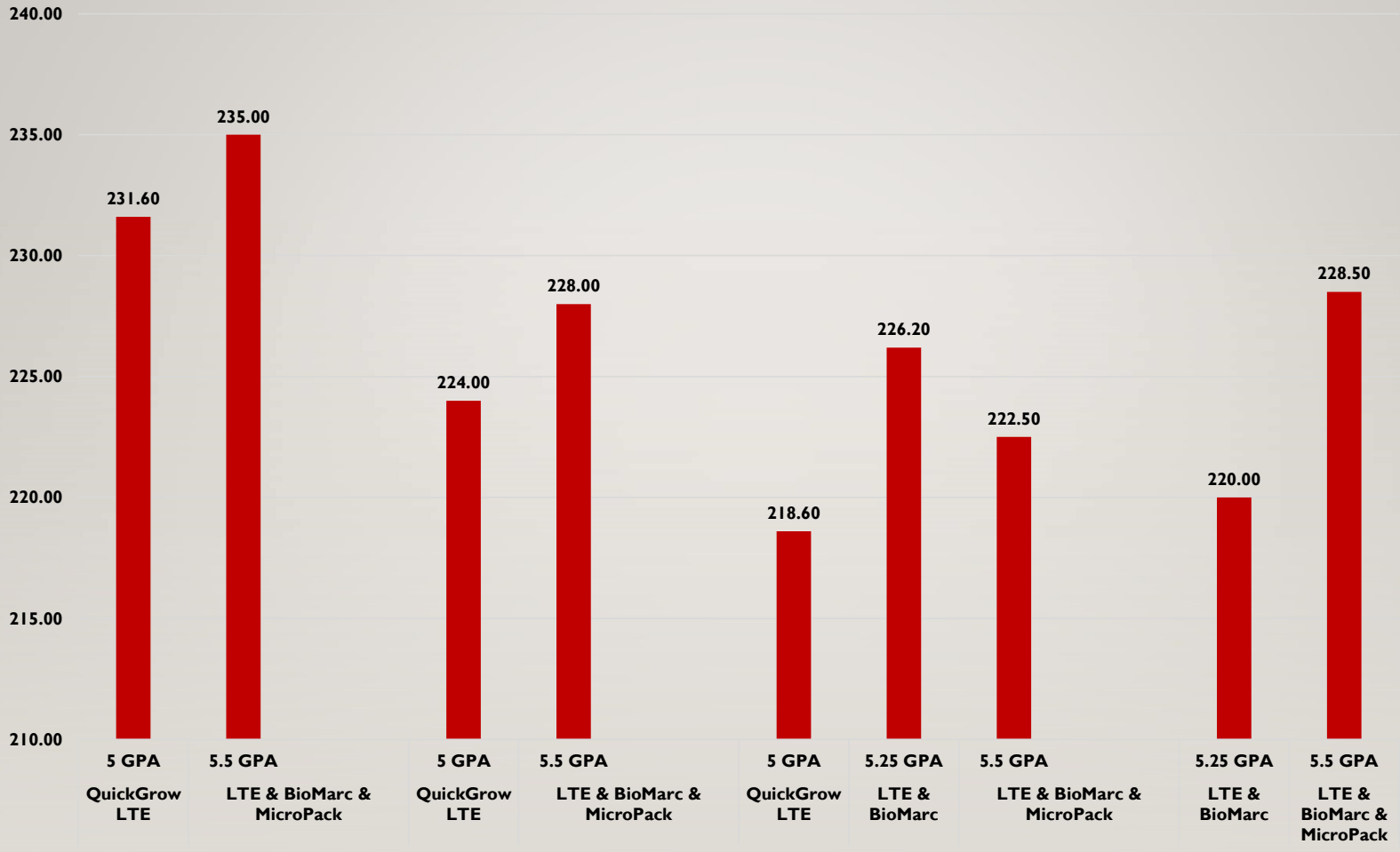
**2020 Evergreen FS -Bloomington, IL  
Corn.....QuickGrow Elite In-Furrow**



**2017 - 2020 Evergreen FS - Bloomington, IL  
Corn.....QuickGrow Elite In-Furrow**



**2020 HarBrand Farms - Clinton, IL  
Corn.....QuickGrow/BioMarc/MicroPack In-Field Data**





## 2020 PTI Results

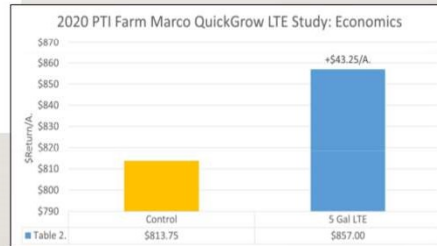
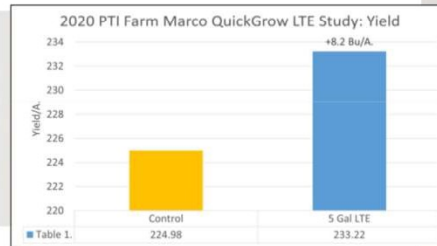
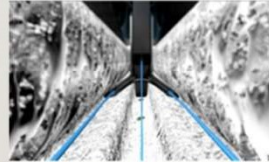
### Marco QuickGrow™ LTE FurrowJet® Study

**Objective:** To evaluate the yield and net return of Marco Fertilizer's QuickGrow LTE 6-20-4-.25Zn-2.7S liquid starter fertilizer at a rate of 5 Gal/A. applied in an at-plant 3-way FurrowJet application. QuickGrow LTE is a 70% polyphosphate and 30% orthophosphate formulation of nitrogen, phosphorus, potassium, sulfur, and EDTA Zn.

**Results:** Table 1. illustrates that applications of 5 Gal/A. rates of Marco QuickGrow LTE resulted in yield gains of +8.2 Bu/A.

As we focus on return on investment (Table 2.), calculates that 5 Gal/A. rates proved additional net revenue of +\$43.25/A. over the untreated control.

Figure 1: FurrowJet 3-Way In-Furrow Band

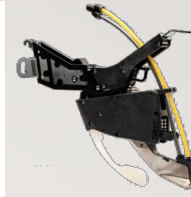




# 2018 PTI Results

## Marco QuickGrow™ LTE FurrowJet™ Study

**Objective:** To evaluate the yield and net return of Marco Fertilizer's QuickGrow LTE 6-20-4-.25Zn-2.7S liquid starter fertilizer. Five different rates were used in a tri-band FurrowJet application at planting. QuickGrow LTE is a 70% polyphosphate and 30% orthophosphate formulation of nitrogen, phosphorus, potassium, sulfur, and EDTA Zn.



**Results:** 100% of FurrowJet treatments of QuickGrow LTE proved positive yield increases. Rates from 4-12 gal/A. averaged 9.1 Bu/A. 8 gallons provided the largest yield increase of +11.1 Bu/A.

In regard to return on investment, the economic optimum rate in this study proved to be 8 gal/A., netting an additional \$11.53/A. over the untreated control. Rates at 4-8 gal/A. all proved profitable, however rates applied at the higher spectrum of 10-12 gal/A. did not achieve enough yield gains to pay for the cost of fertilizer. These rates proved negative returns of **-\$1.52 and \$6.49/A** respectively.

Table 1: Yield Response

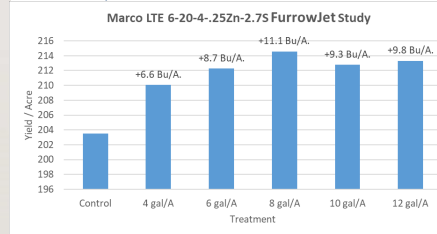
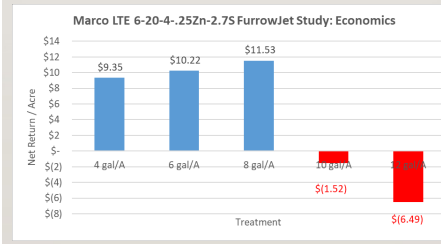


Table 2: Economic Return



Planting Date: 5/10 Hybrid: DKC 63-21SS Population: 36K Row Width: 30" Rotation: CAB Corn Price: \$3.50

Fertilizer Pricing: Marco LTE 6-20-4-.25Zn-2.7S \$3.40/Gal \$30 DAP Reallocation

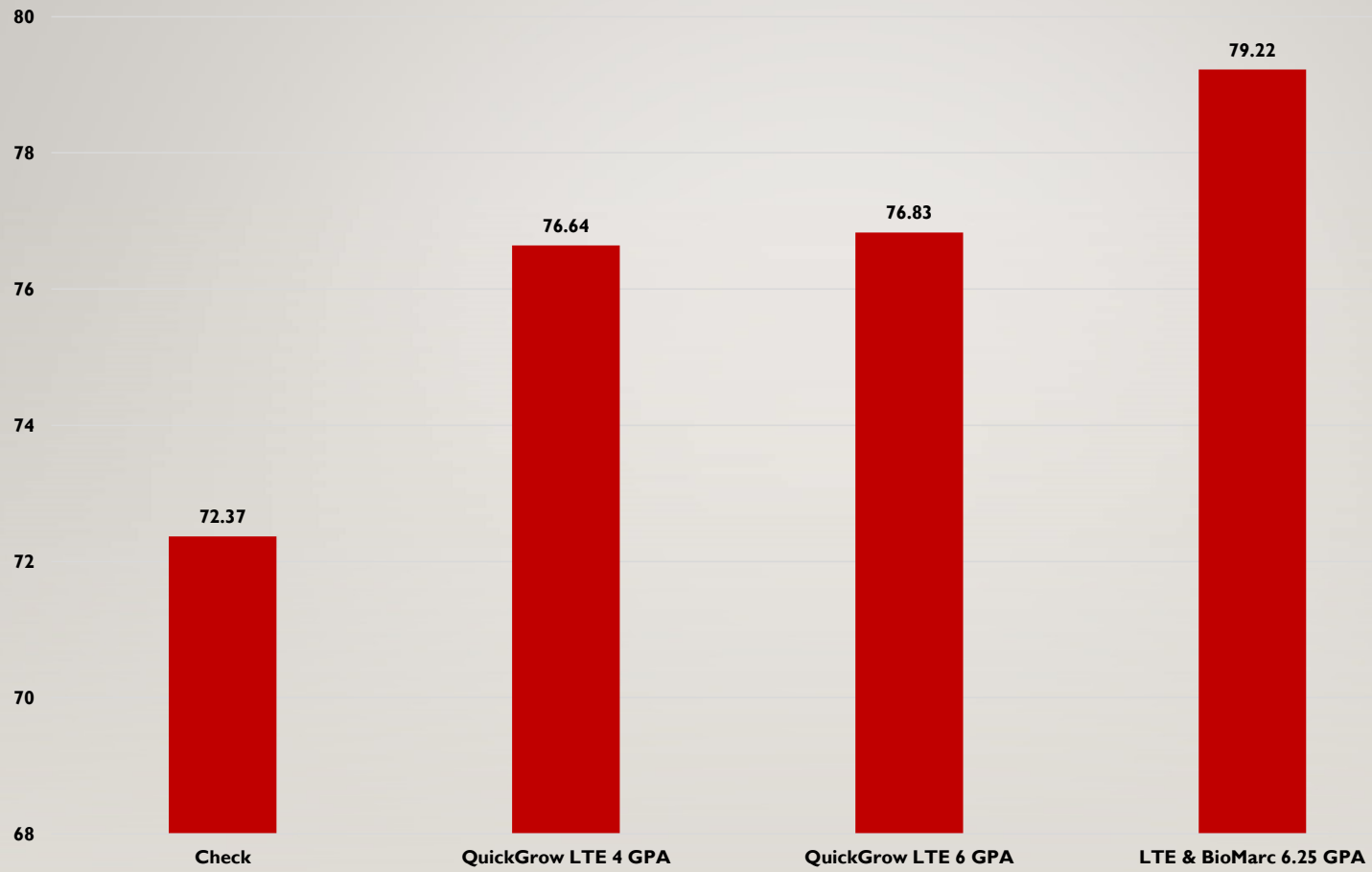
**QUICKGROW**

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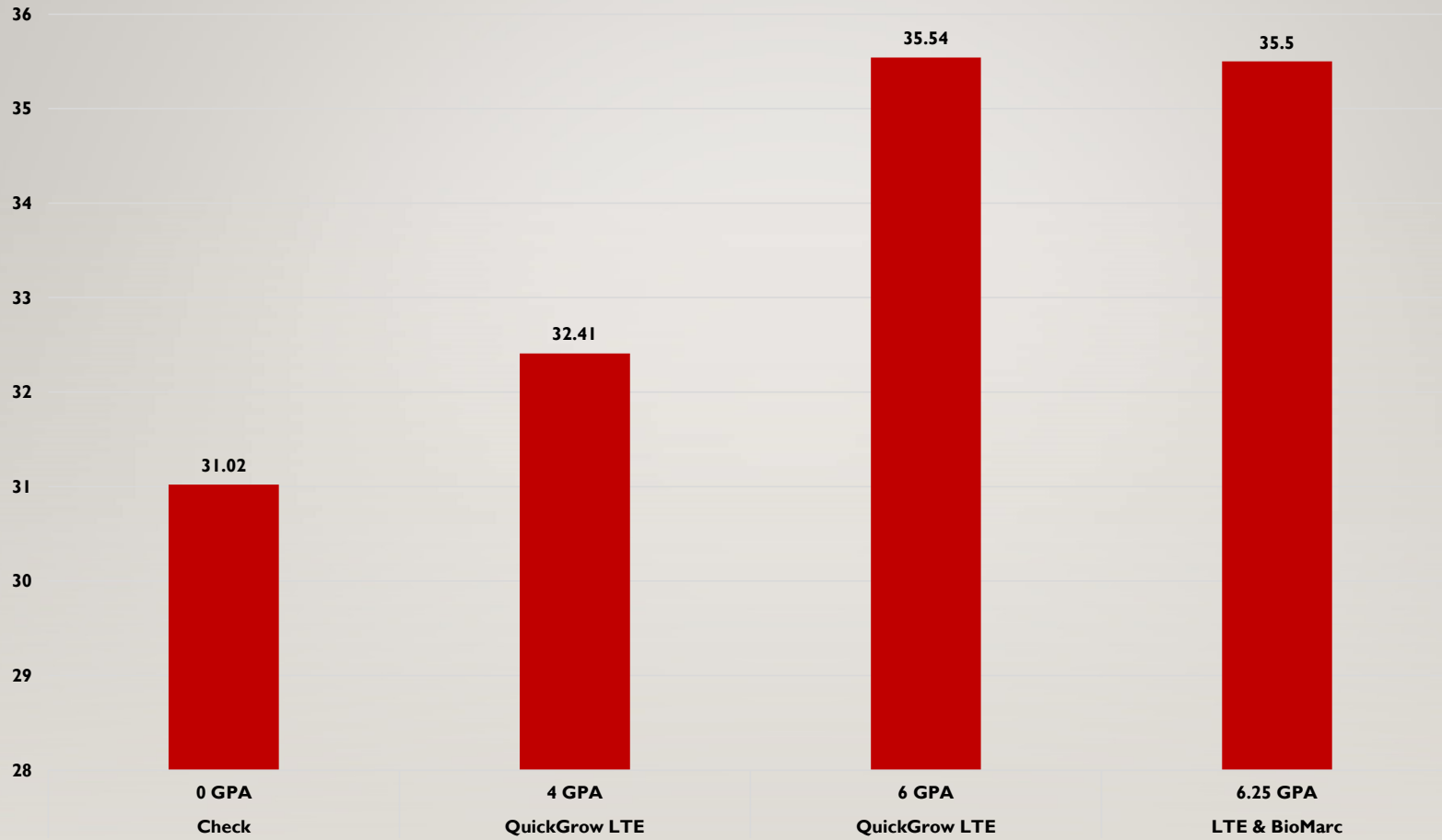
**SOYBEANS**



**2020 Agri-Tech Consulting  
Soybean.....QuickGrow LTE  
FurrowJet Wings**



**2020 CropSmith - Farmer City, IL**  
**Soybean.....QuickGrow LTE**  
**FurrowJet Wing**





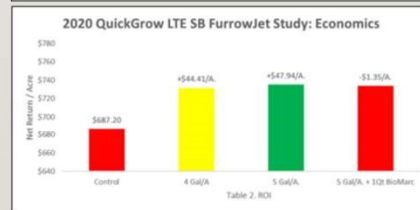
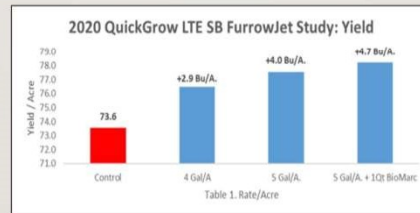
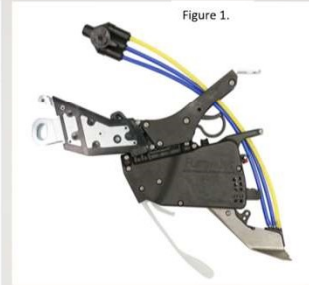
## 2020 PTI Results

### Marco QuickGrow LTE FurrowJet® Study

**Objective:** To evaluate the yield and net return of Marco Fertilizer's QuickGrow LTE 6-20-4-.25Zn-2.7S liquid starter fertilizer. QuickGrow LTE is a 70% polyphosphate and 30% orthophosphate formulation of nitrogen, phosphorus, potassium, sulfur, and EDTA Zn. Marco LTE starter treatments are applied at 4 and 5Gal/A. as a FurrowJet *wing* treatment only (Figure 1).

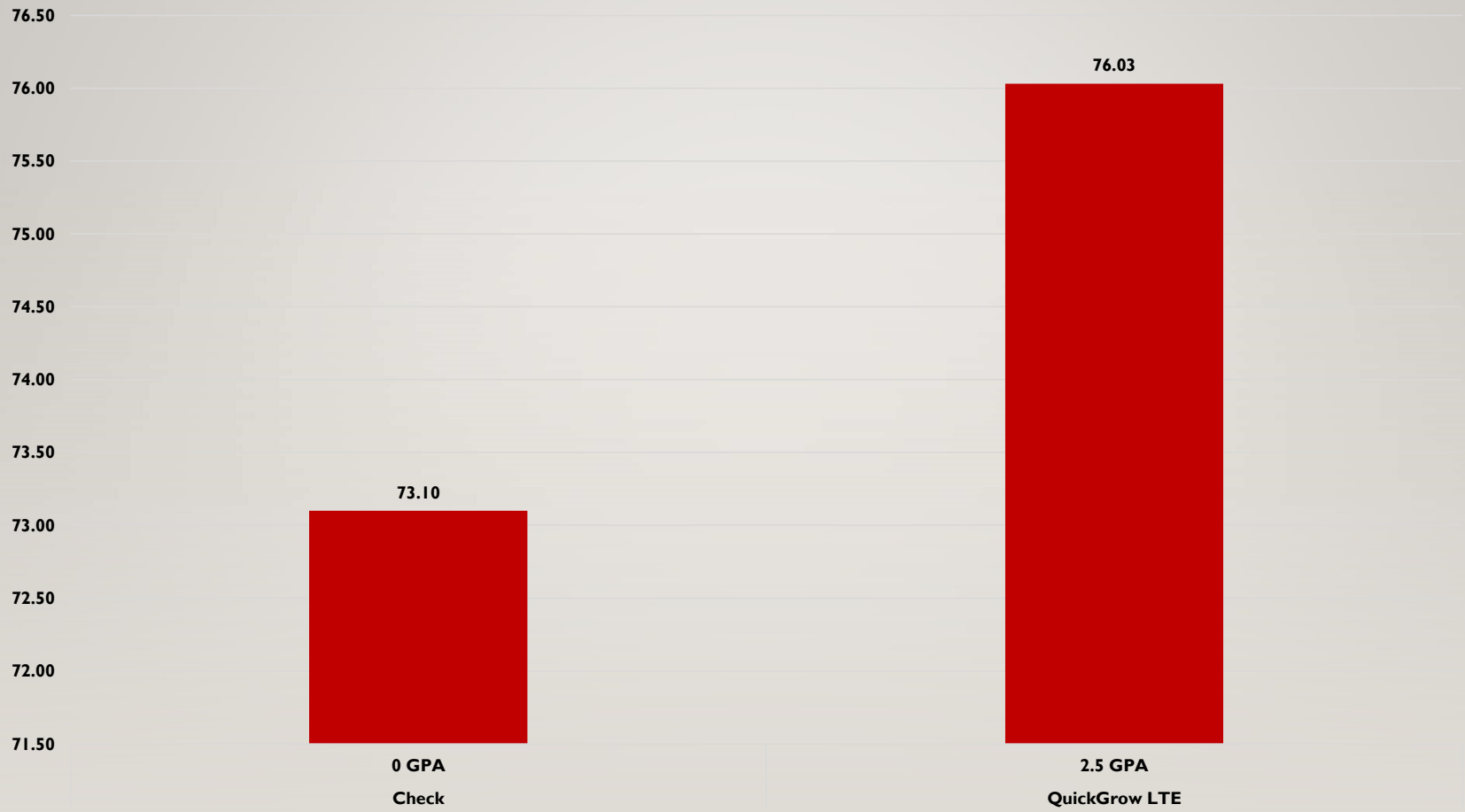
**Results:** 5 Gal/A. rates showed both agronomic and economic optimum rate with yield advantages of +4.0 Bu/A. and a return on investment of +\$47.94/A. (Tables 1-2).

As an additional entry, we added BioMarc to the 5 Gal/A. treatment. BioMarc, is a unique combination of naturally extracted biostimulants including kelp-based materials, coupled with nutrient-enabling technologies that enhance liquid fertilizer performance. BioMarc provided +0.7 Bu/A. yield gains and provided a negative return on investment of **-\$1.35/A.**



Planting Date: May 17    Variety: GH 3582E3    Population: 130K    Row Width: 30"    Rotation: BAC    SB Price: \$9.75    Marco LTE: \$3.50/Gal  
 BioMarc: \$28/Gal    Dry Fertilizer Reallocation: \$30/Acre

**2020 HarBrand Farms - Clinton, IL  
Soybeans.....QuickGrow LTE  
In-Furrow (3 Field Trial Ave.)**



# MARCO

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CROPTech CONSULTING

2020 FIELD TRIALS



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# WAPPELLA, IL STARTER PLOT

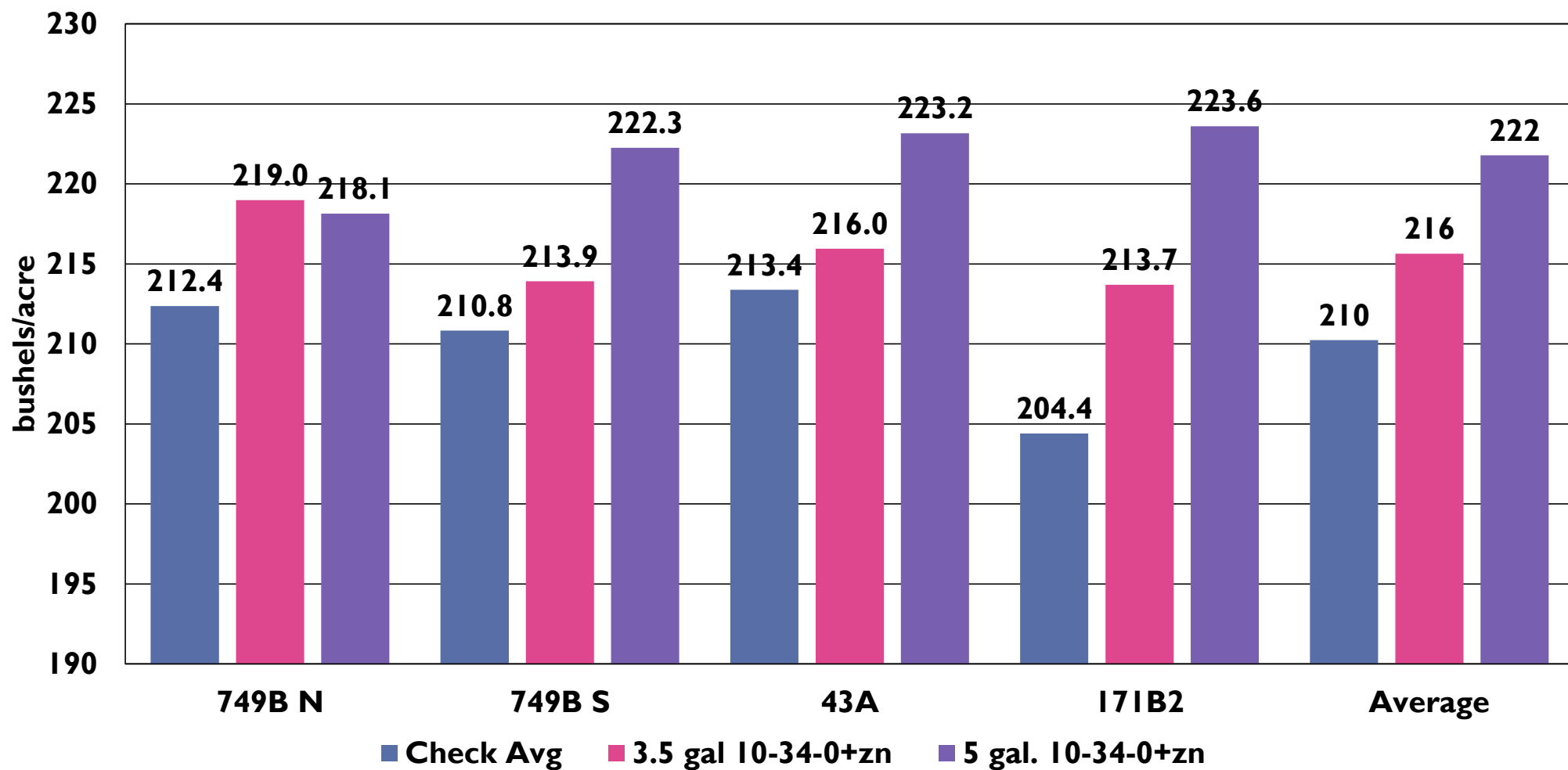




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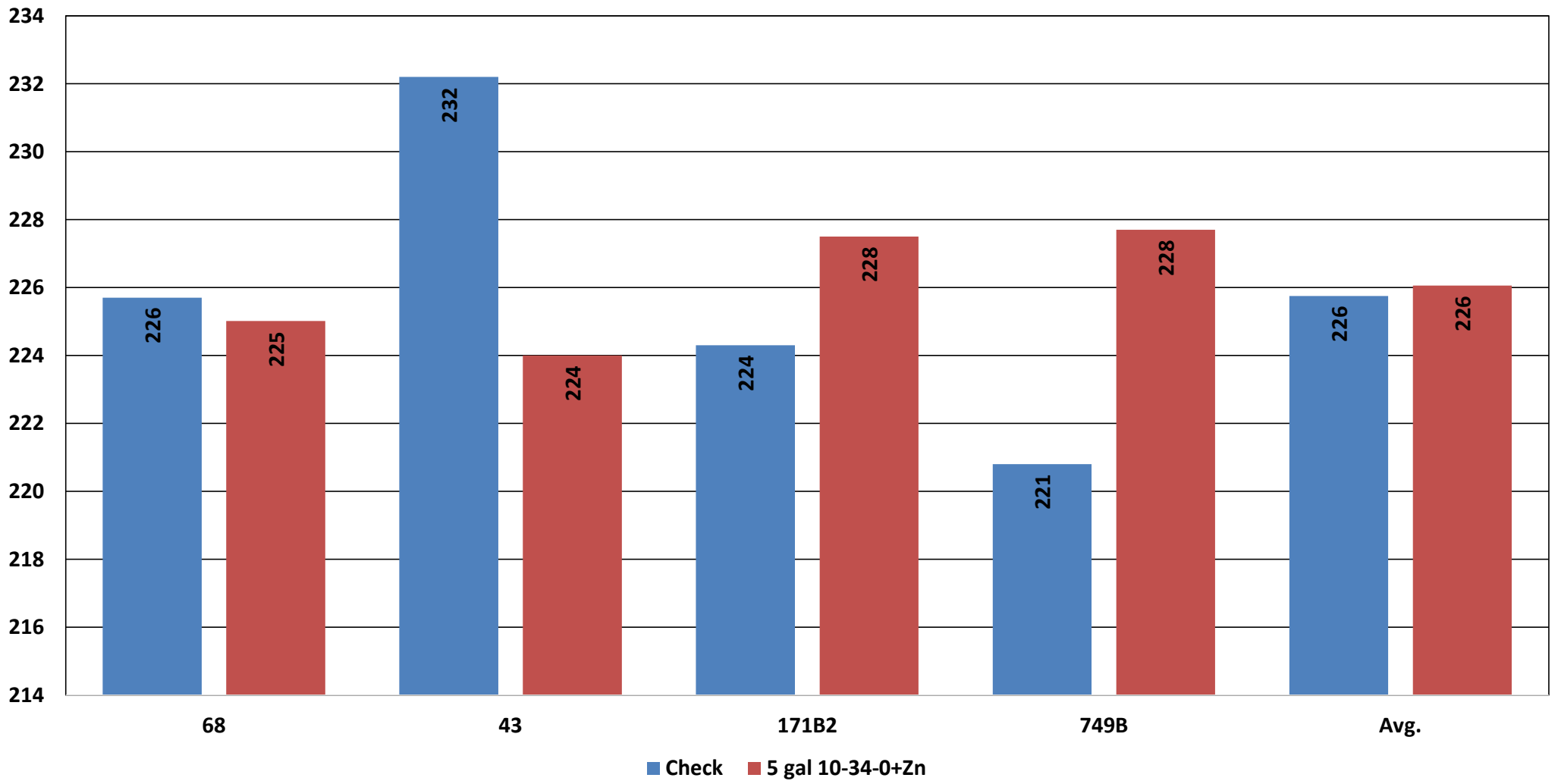
Starter

## Wapella, IL Starter Plot 2020 Corn Yields

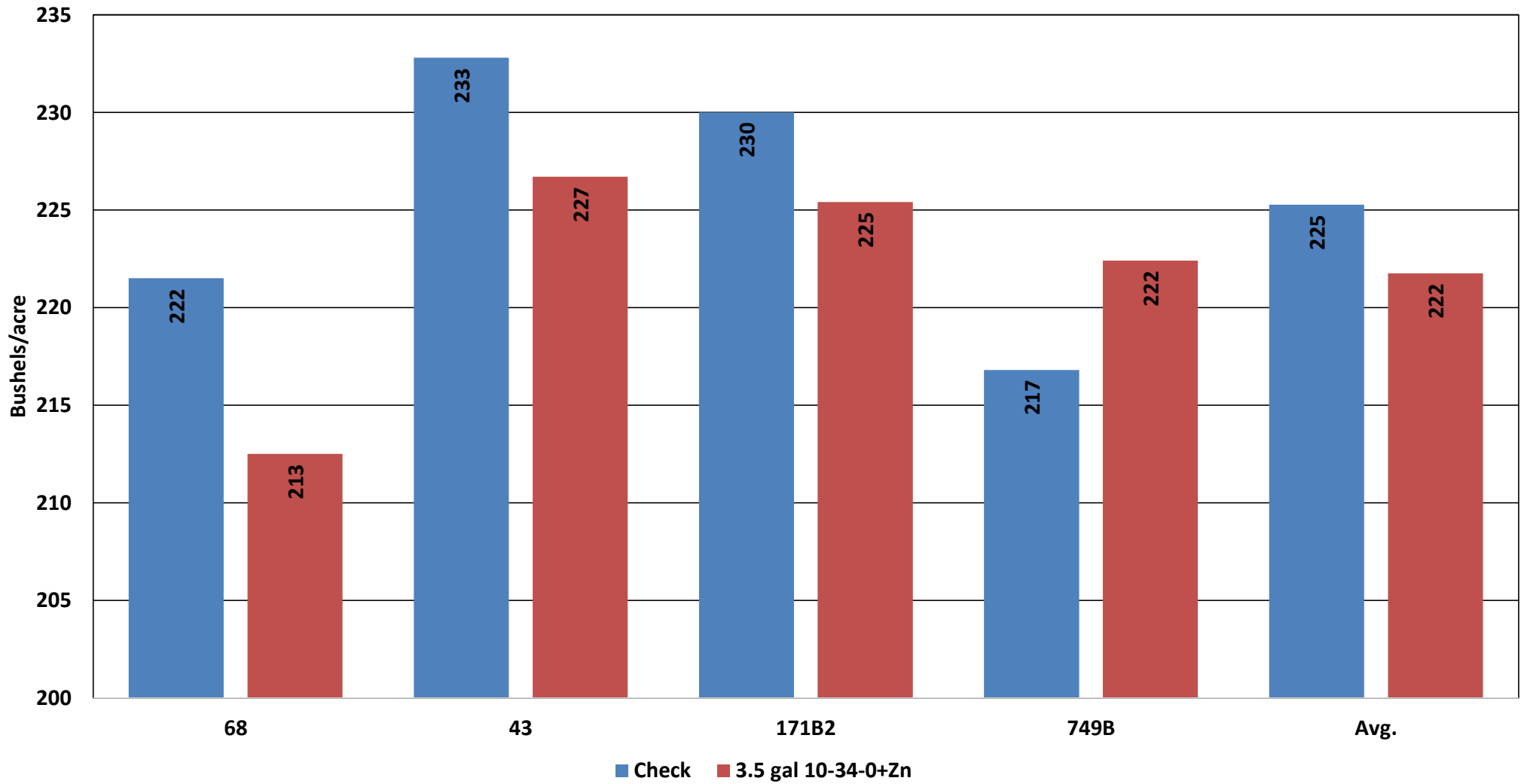




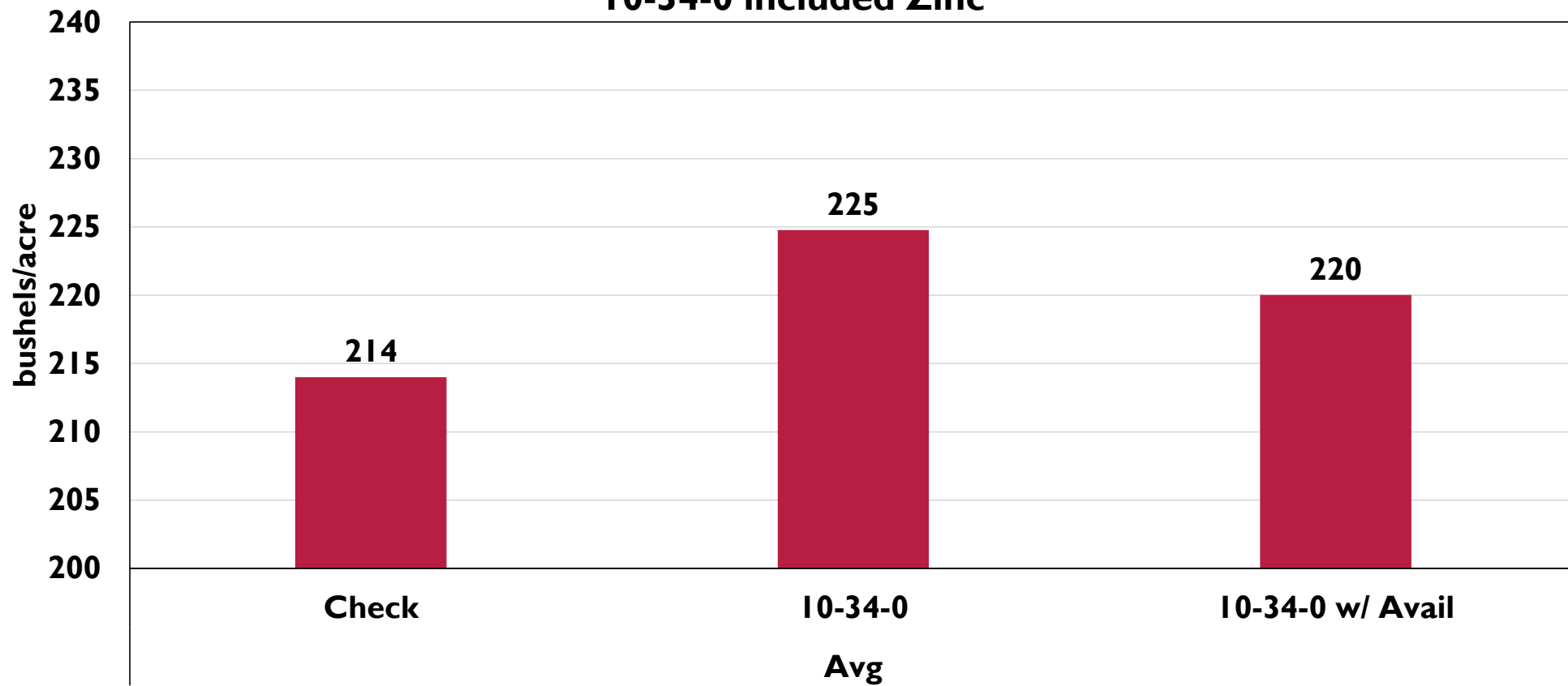
# Clinton, IL 2020



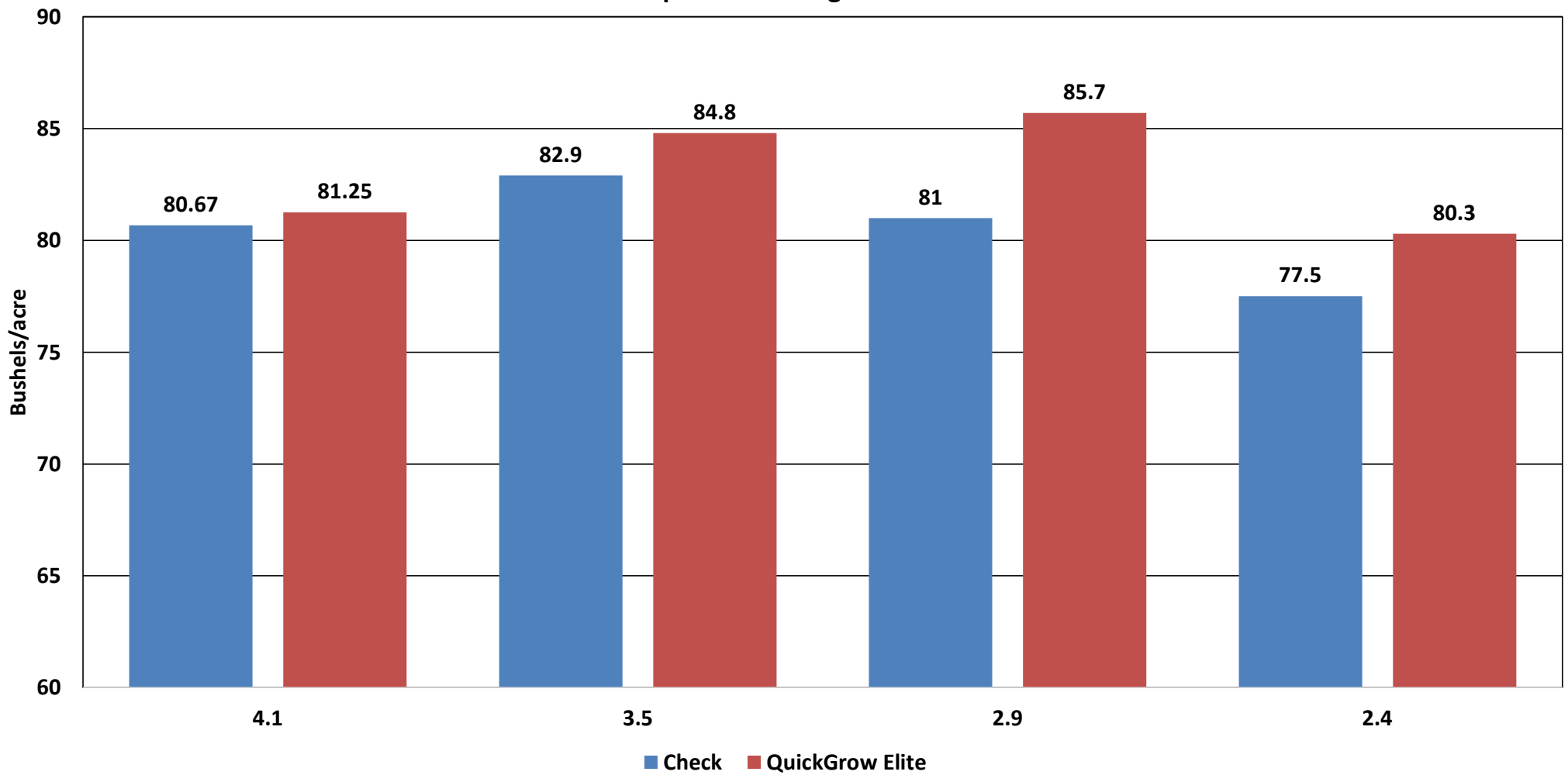
### Clinton, IL 2020



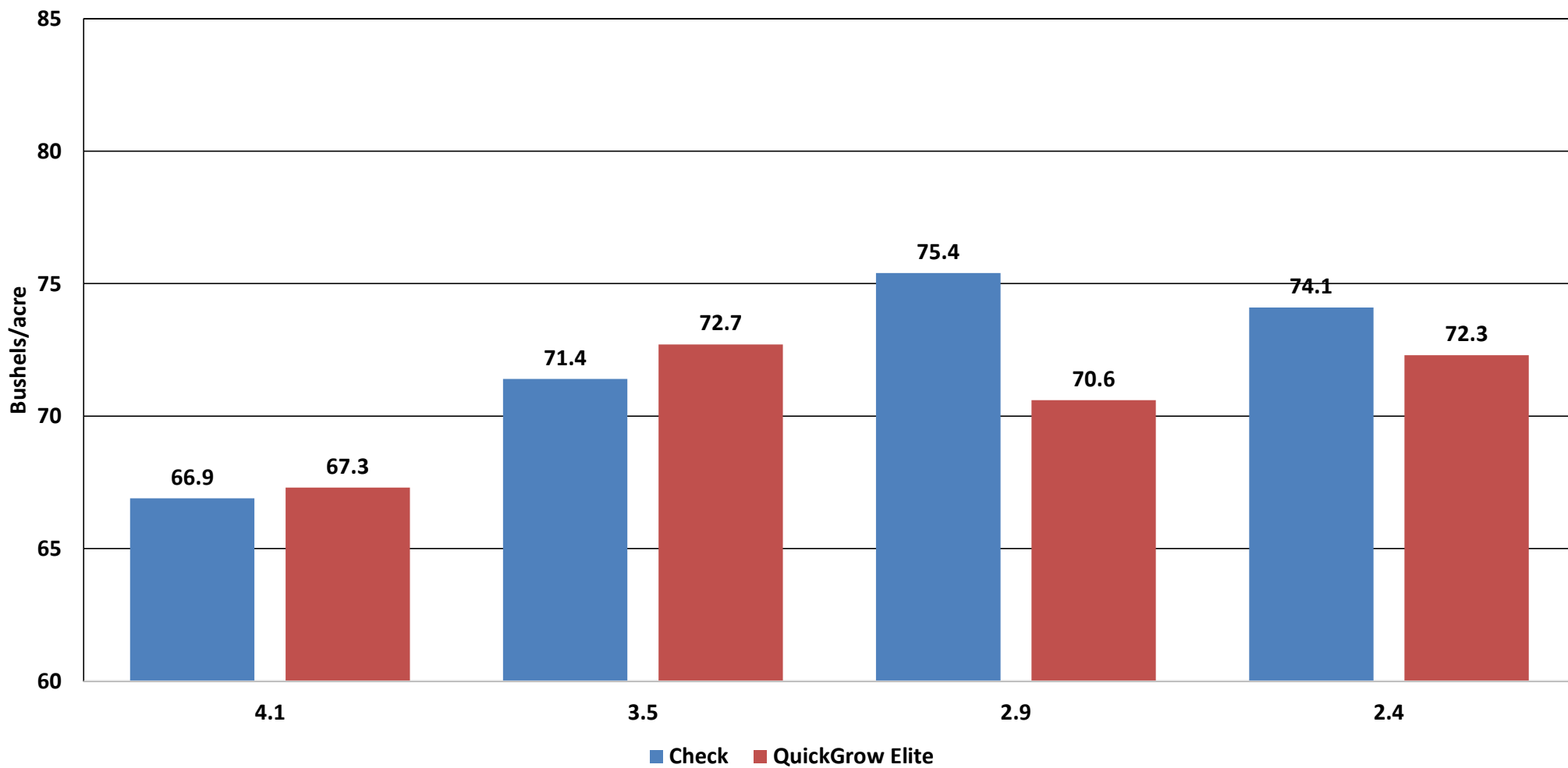
**Heyworth, IL Starter Plot  
2020 Corn Yields  
\*10-34-0 included Zinc**



Heyworth, IL Soybeans  
April 16 Planting South Pond



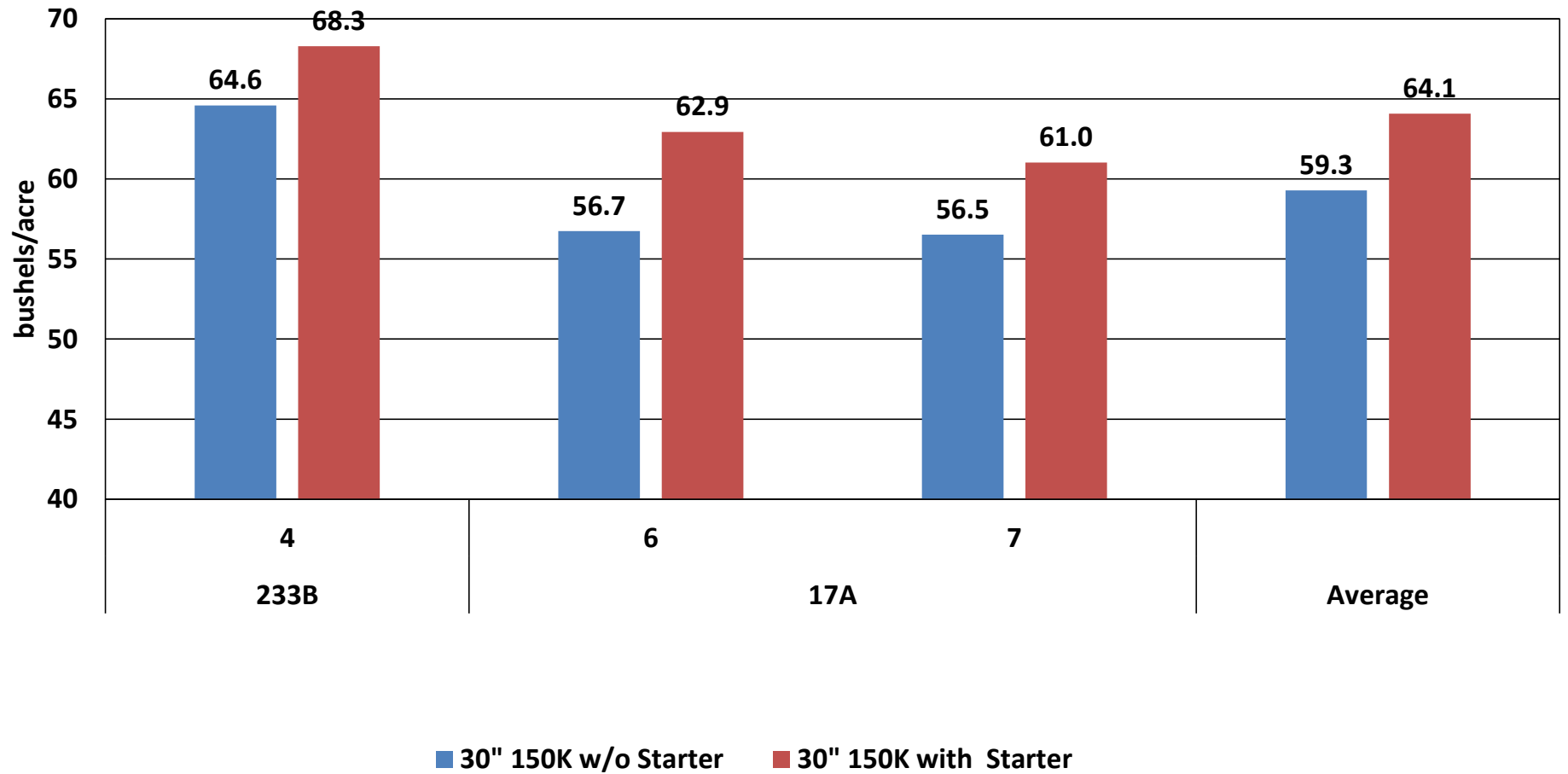
Heyworth, IL Soybeans  
June 1st Planting South Pond



QuickGrow Elite through FurrowJet wing  
4/20 Planting Date



**Wapella, IL Soybean Row Spacing Population  
QuickGrow Elite  
2020 Soybean Yields**



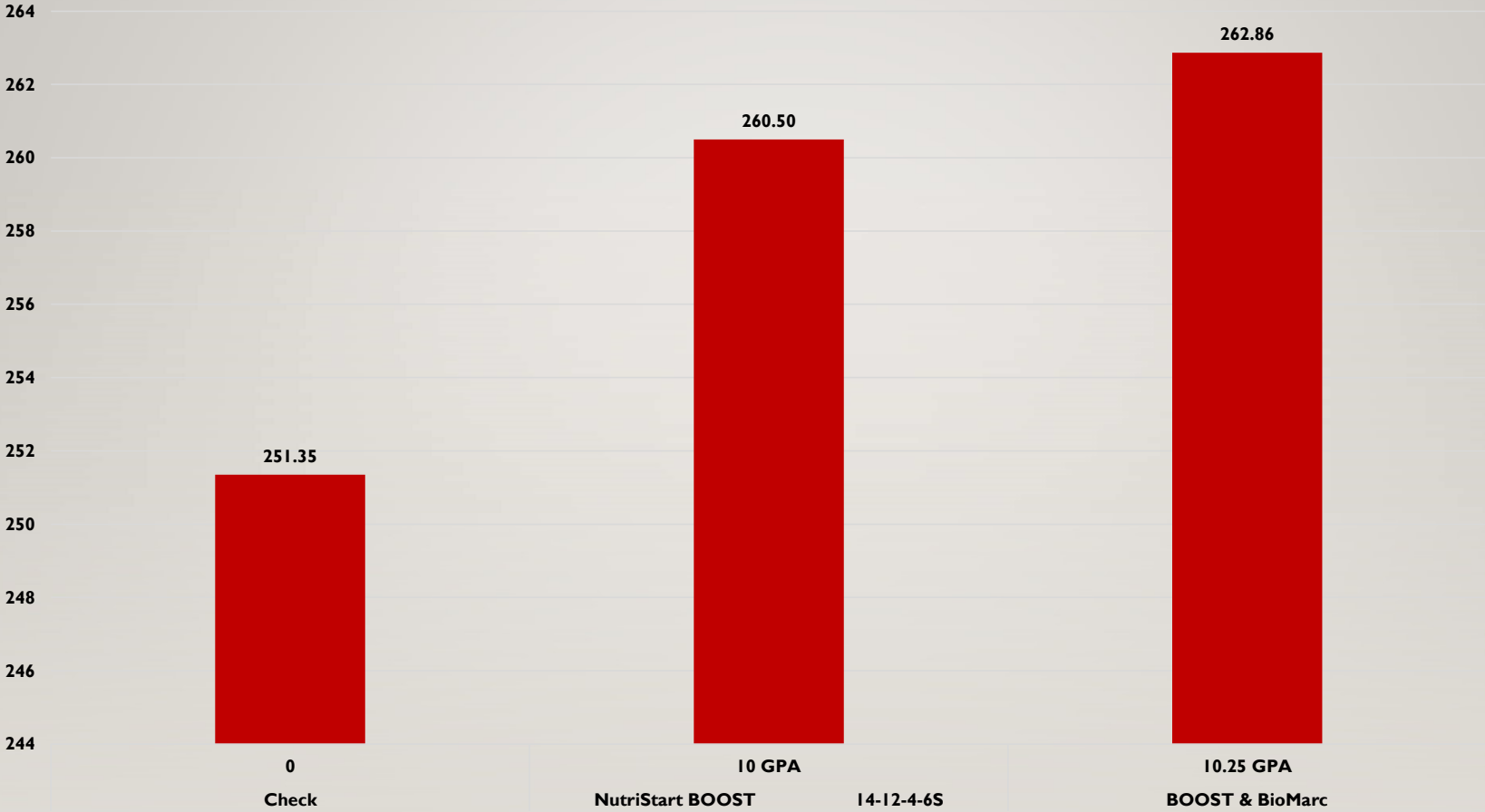
# 2020 MARCO TRIALS

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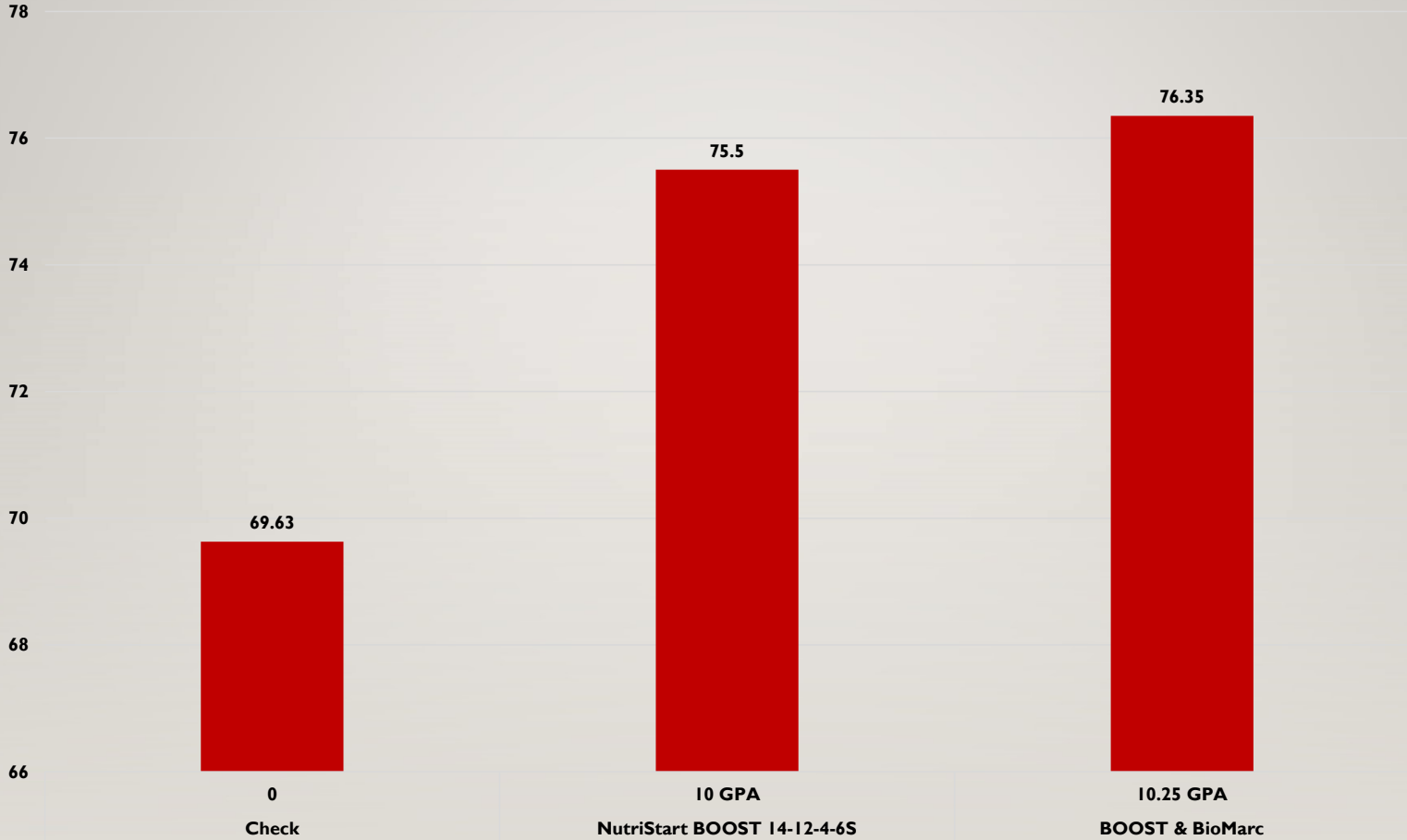




**2020 Agri-Tech Consulting  
Corn.....NutriStart BOOST  
(14-12-4-6S)**



**2020 Agri-Tech Consulting  
Soybean.....NutriStart BOOST  
(14-12-4-6S)**



## Marco Fertilizer NutriStart BOOST 14-12-4-6S Study

**Objective:** This irrigated soybean application trial evaluates the yield and net return of Conceal® system dual band treatments of NutriStart™ BOOST 14-12-12-4-6S at 10, 15, and 20 Gal/A. rates. This liquid fertilizer is a 70% polyphosphate and 30% orthophosphate formula designed for non-in furrow applications in soybeans. NutriStart products are manufactured with Marco 10-34-0, Potassium - soluble potash (K2O), Sulfur - Ammonium Thio-Sulfate and Zinc - 9% EDTA or ammoniated.



Conceal® system is an ideal placement for this product as its far enough away from the seed furrow to prevent seed injury, yet close enough to enable access to seedling nutrition (Figure 1).

**Results:** Table 1. illustrates that all rates of 14-12-4-6S proved positive yield gains from +2.2 Bu/A. to +4.2 Bu/A., however 10 Gal/A. provided the economic optimum rate applied resulting in a positive return on investment of +\$28.95/A.

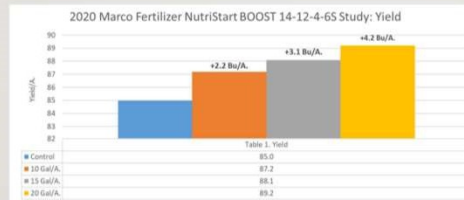


Table 2. reveals long-term multi-year economics during 2018-2020. Over this 3-year period, economic optimum has occurred at the 10 Gal/A. rate of NutriStart BOOST with an average return on investment of +\$46.37/A. NutriStart BOOST has been a solid performer at the PTI farm achieving some of the highest yield and economic gains in soybeans.

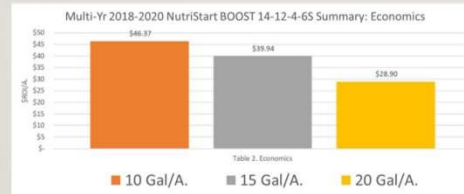


Figure 1. Conceal® Dual Placement 3" from furrow

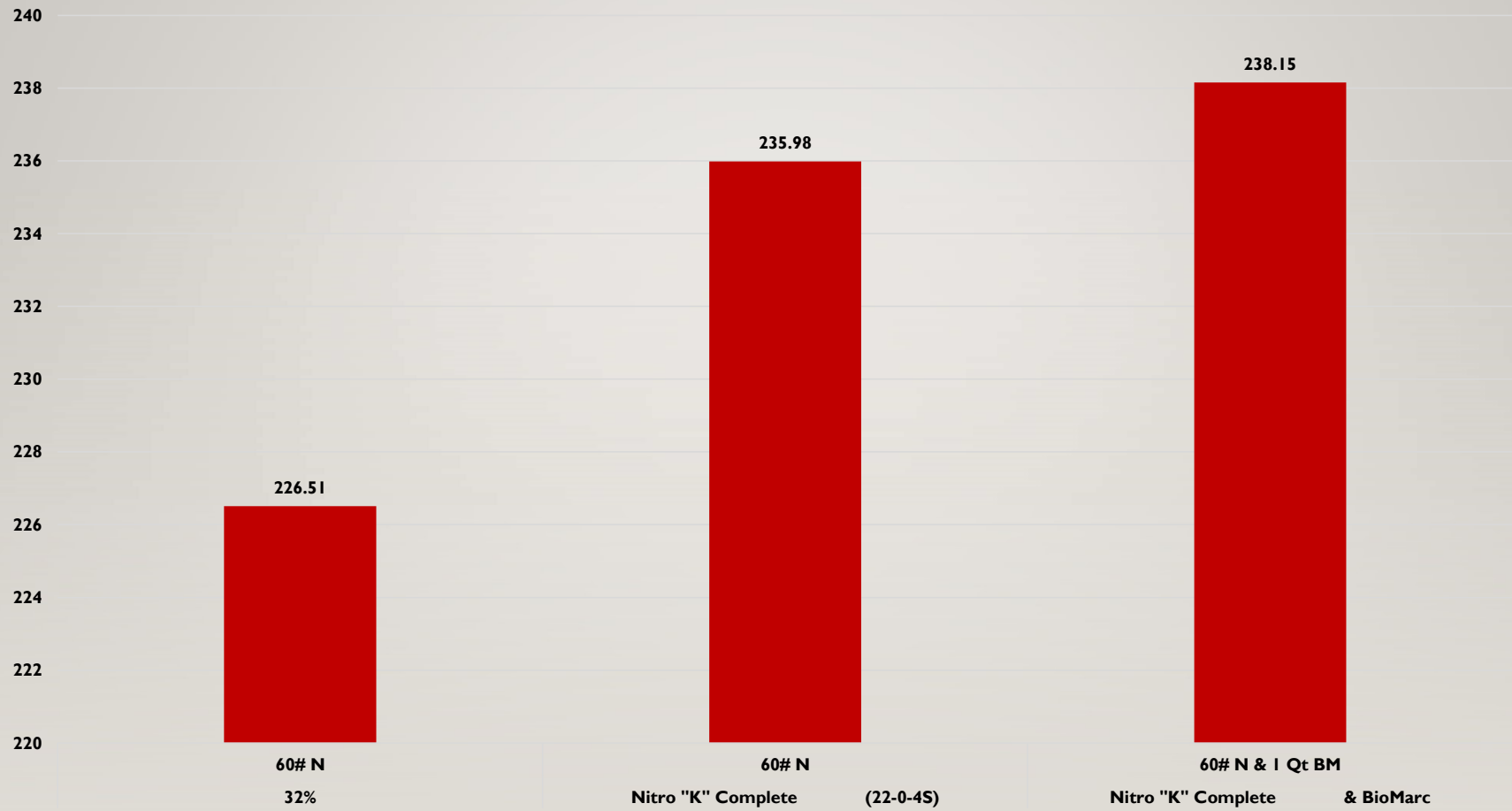


# 2020 MARCO TRIALS

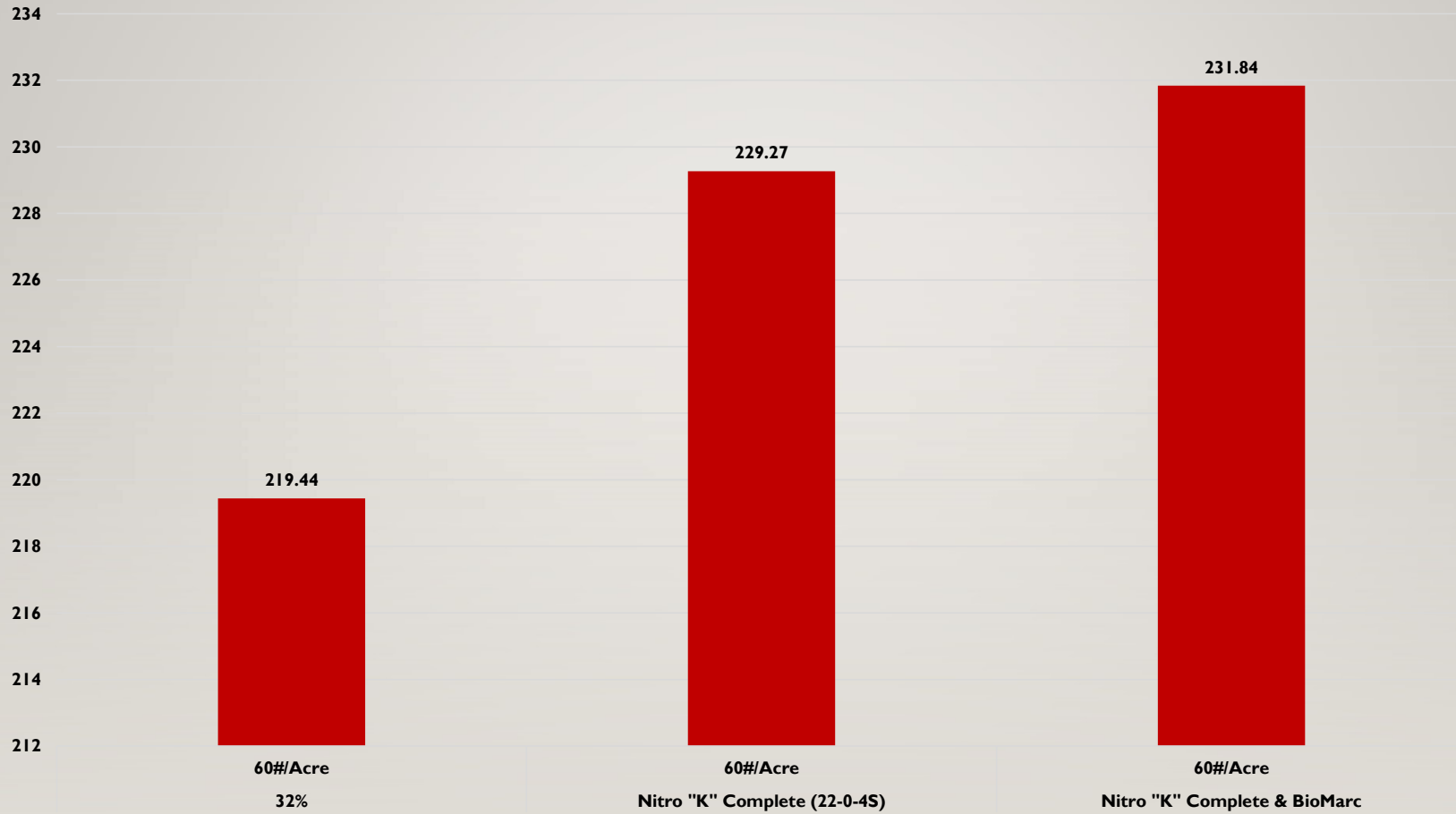
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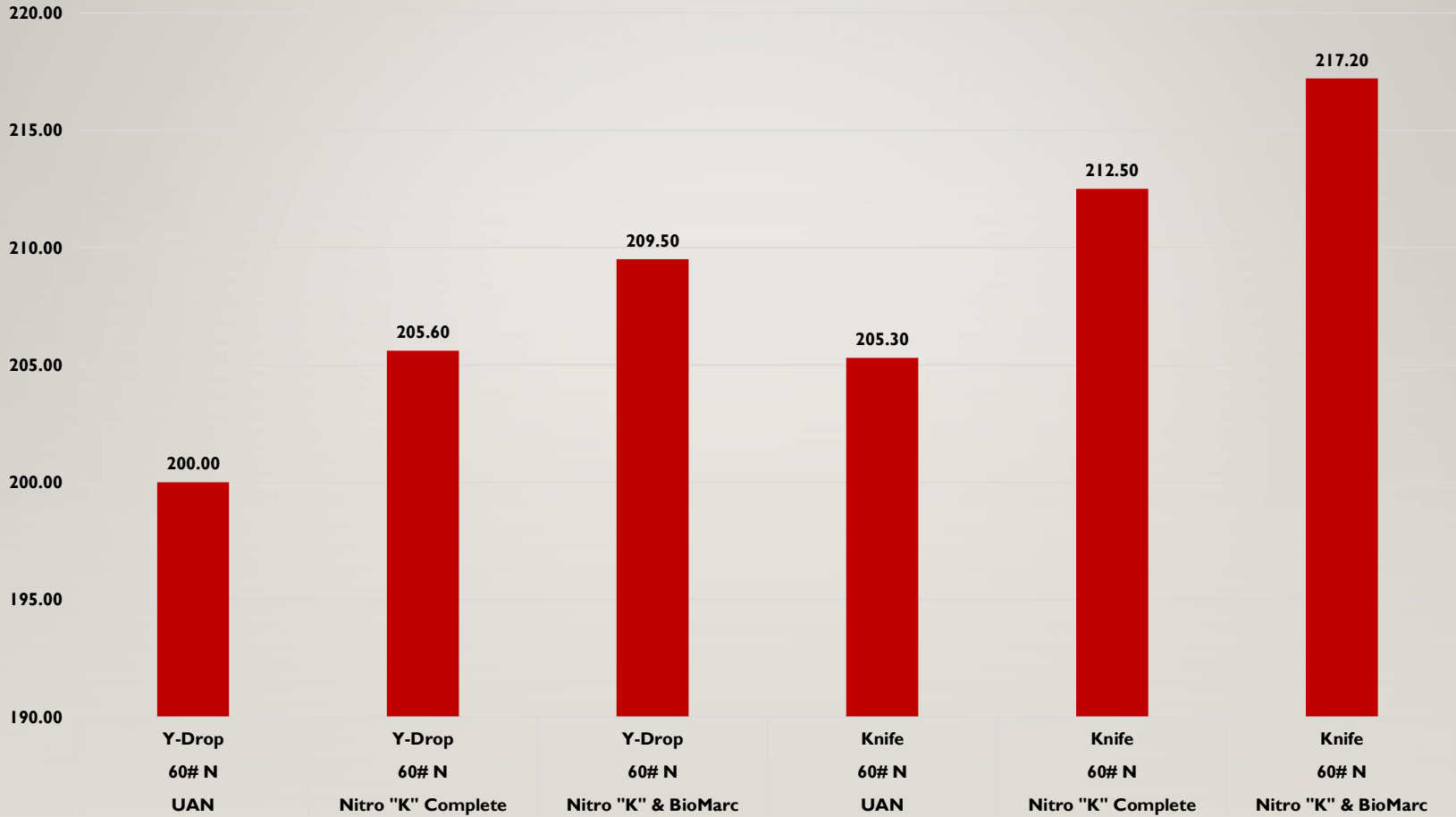
**2020 Agri-Tech Consulting  
Nitro "K" Complete (22-0-4-4S)  
Four Replications**



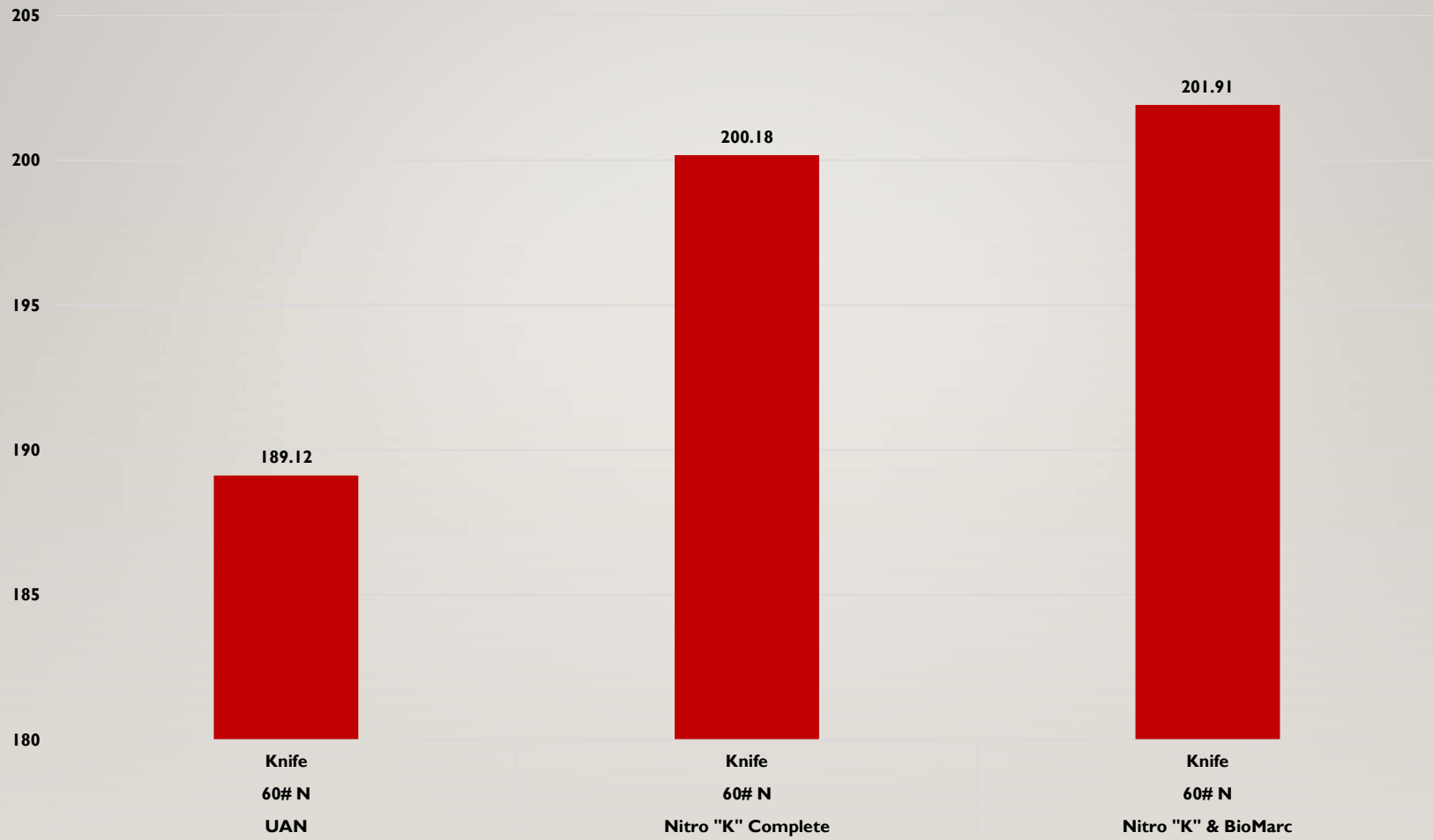
**2019 - 2020 Agri-Tech Consulting  
Nitro "K" Complete  
Four Replications**



**2020 CropSmith - Farmer City, IL  
Nitro "K" Complete Y-Drop vs. Knife  
4 Replications**



**2019-220 CropSmith - Farmer City, IL**  
**Nitro "K" Complete Knife 4 Replications**



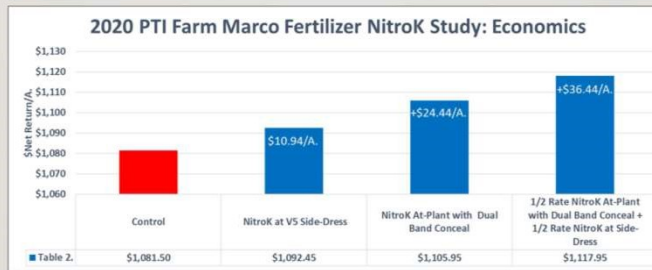
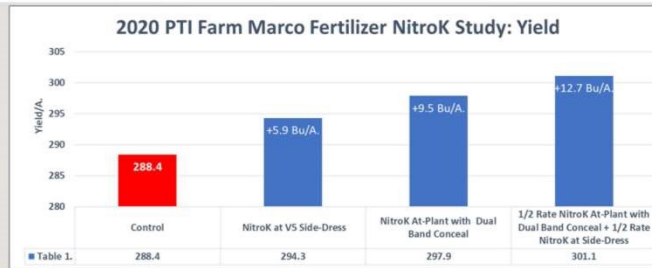




## 2020 PTI Results

### Marco Nitro K Conceal® Study

**Objective:** To evaluate the yield and net return of Marco Fertilizer's NitroK, a 22-0-4-4S liquid fertilizer as a nutritional aid in providing season long availability of nitrogen, potassium, and sulfur. In this study, NitroK is applied at a 60# N rate as a 32% UAN tank-mix partner in a V5 side-dress, as well as an at-plant dual band Conceal application.



**Results:** Table 1. illustrates all NitroK applications provided yield benefit, however 50% split applications of NitroK in both at-plant dual band Conceal, along with a 50% side-dress application proved highest yield advantages of +12.7 Bu/A. with economic returns of +\$36.44/A. (Table 2). Applying NitroK as an at-plant dual band treatment offered a 61% yield improvement over later V5 side-dressing, totaling +\$13.50/A.