MARCO®

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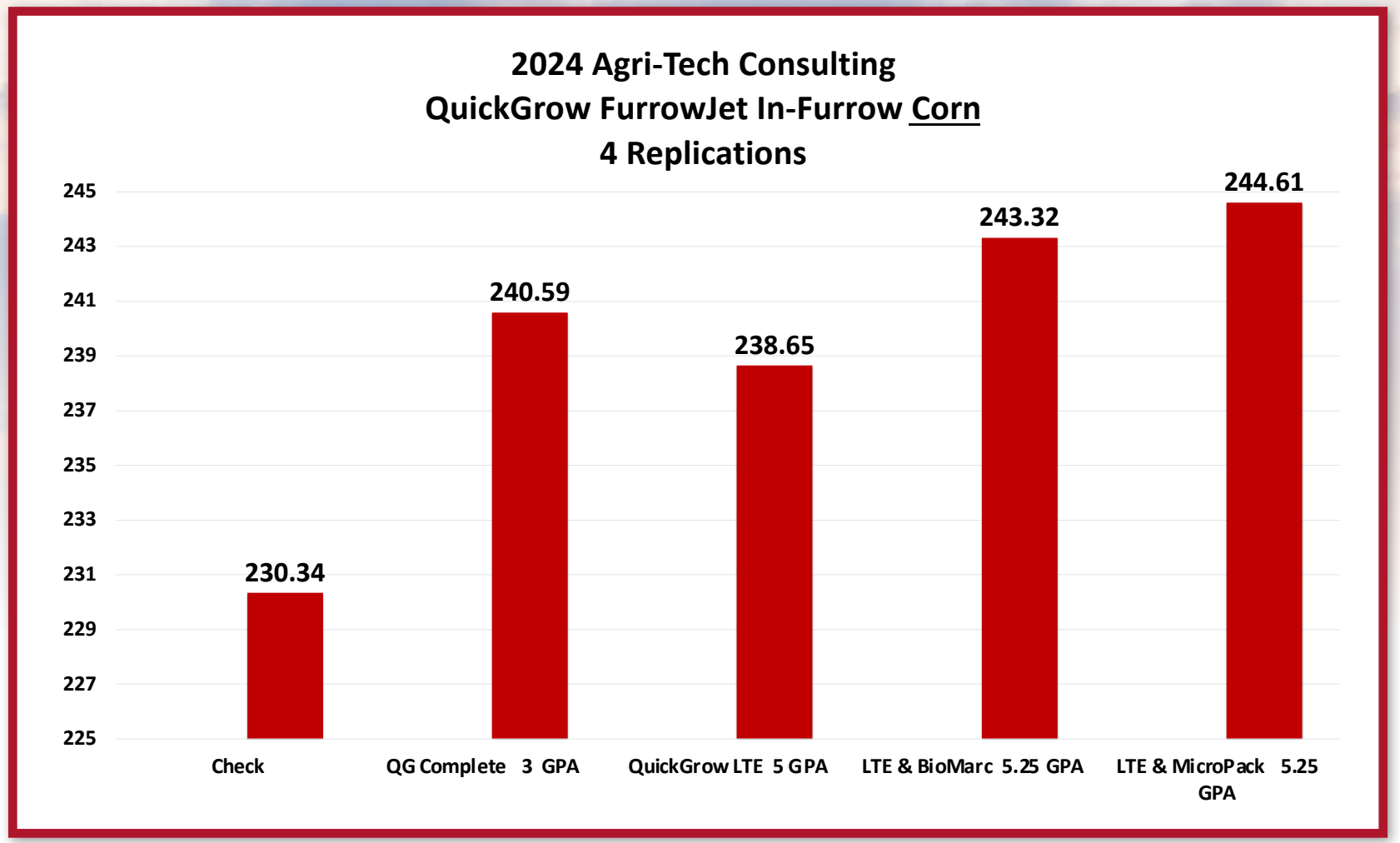
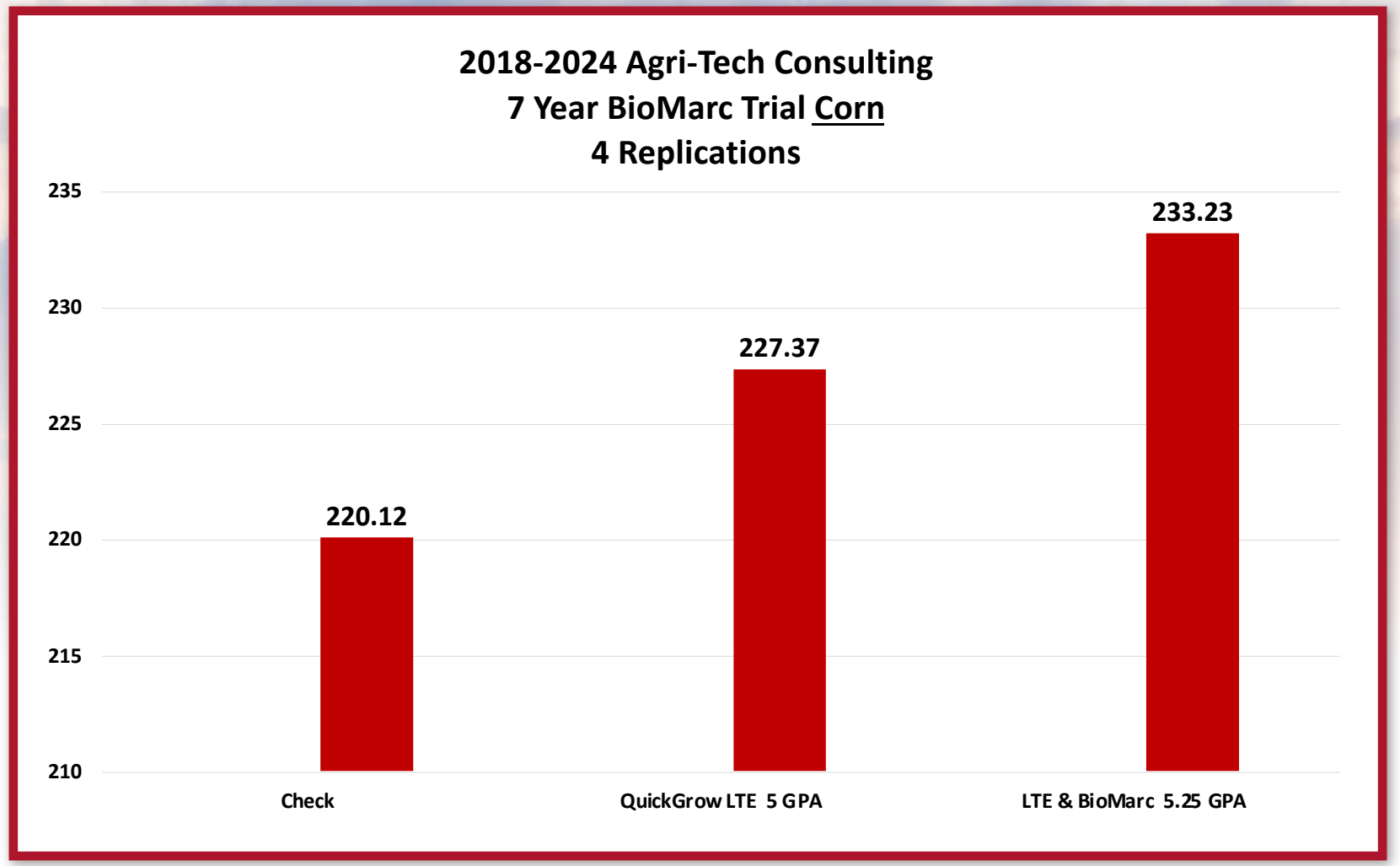
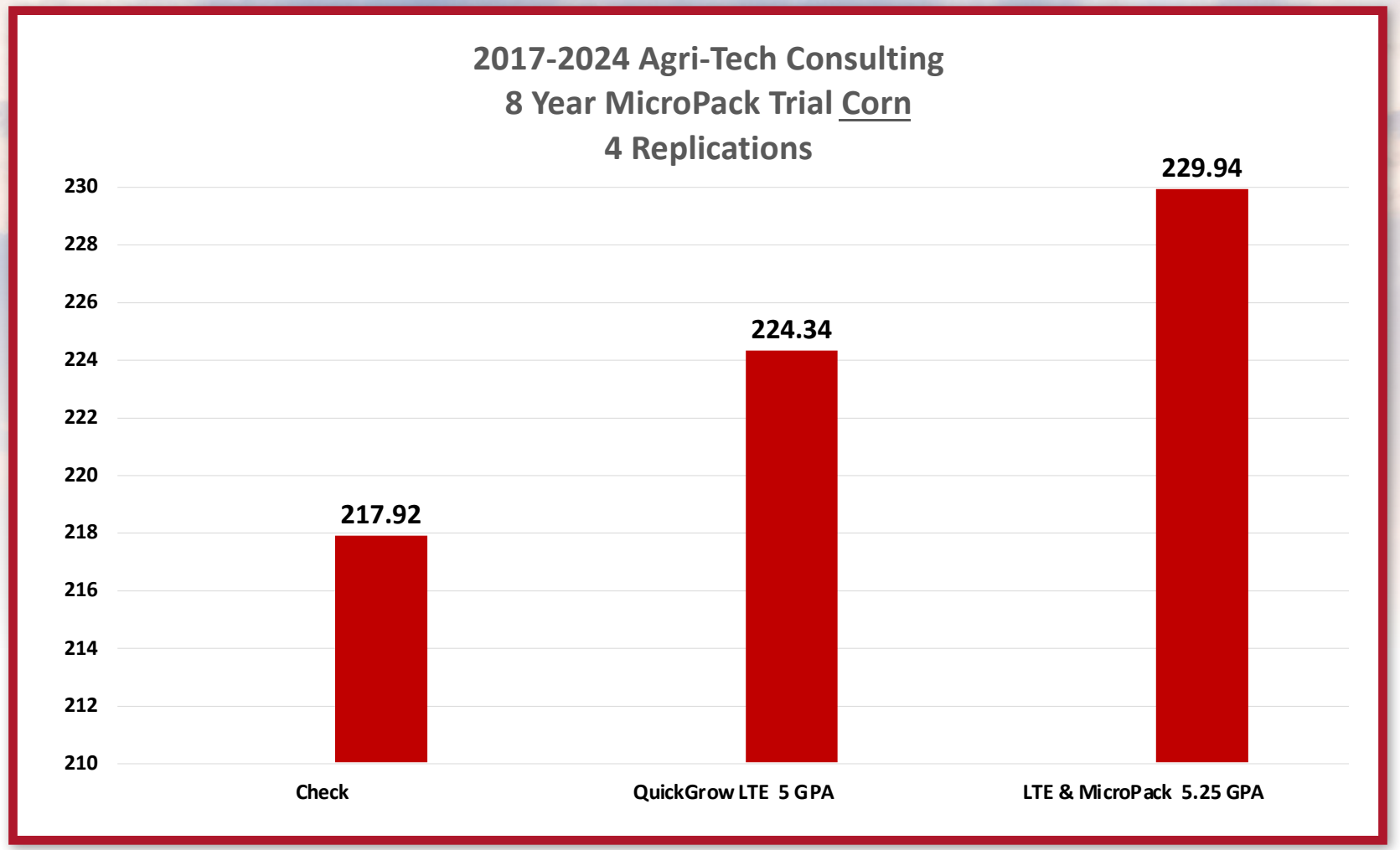
Liquid Fertility

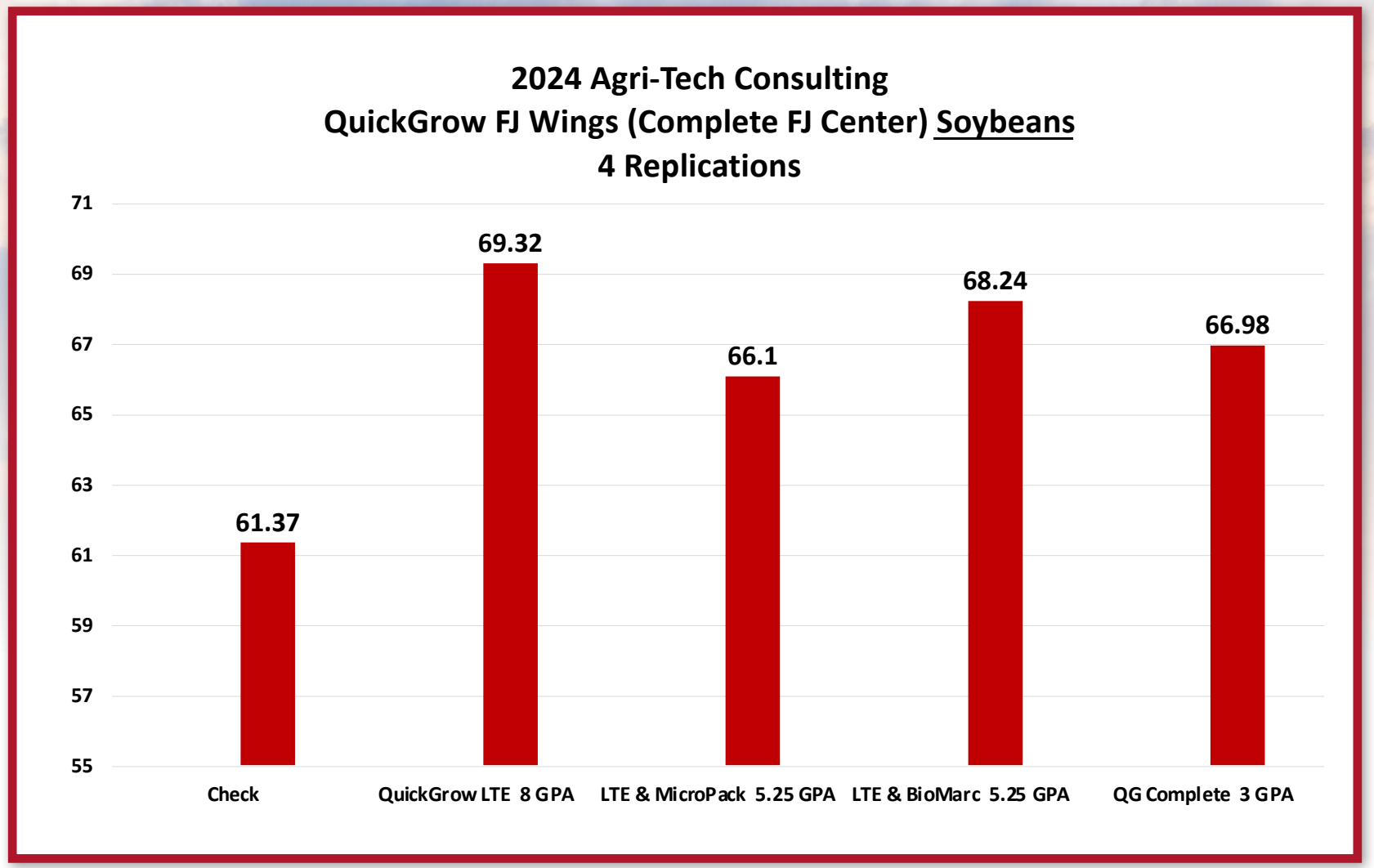
Research Trials 2024

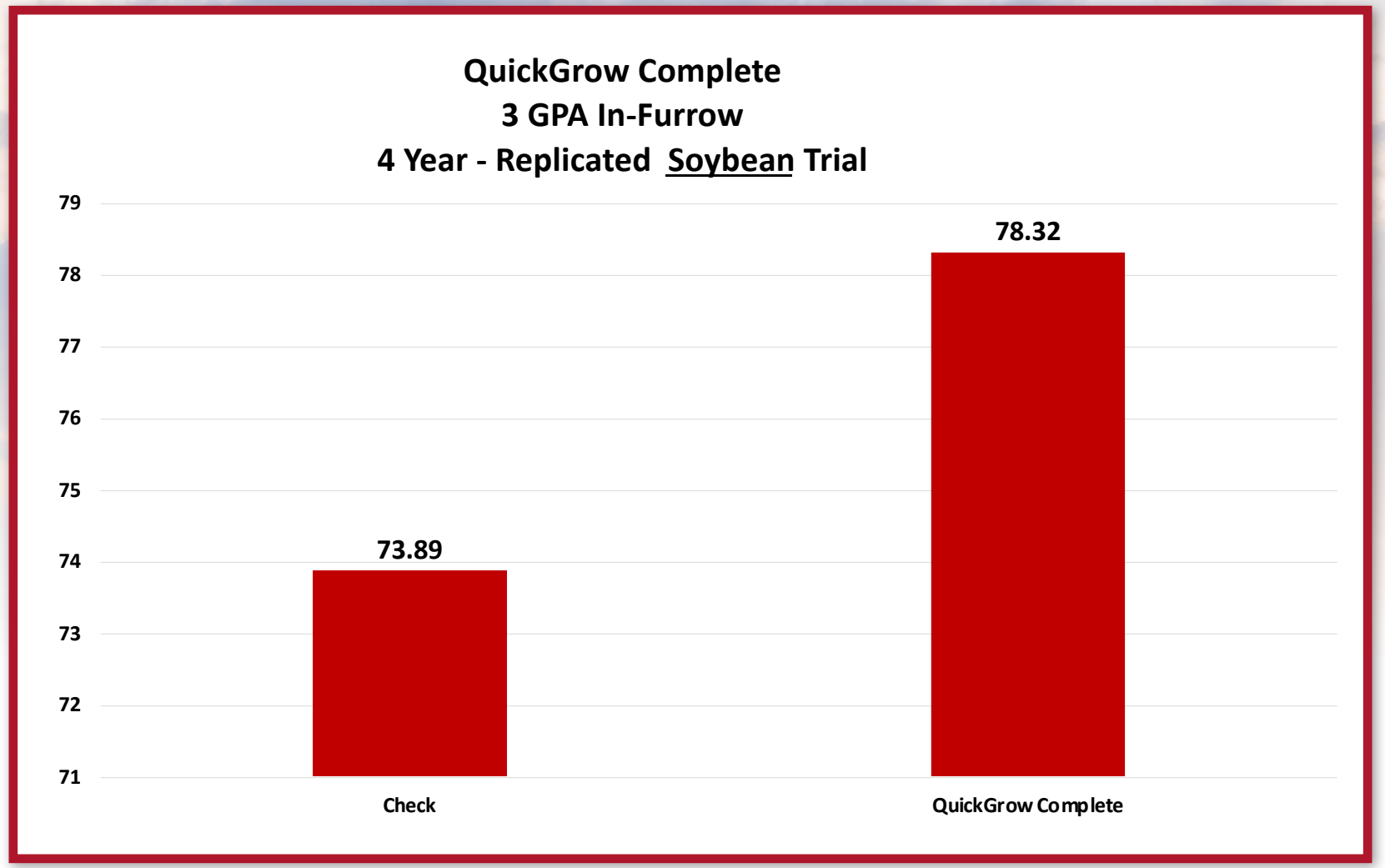

MARCO®
MARCO®
QuickGrow™

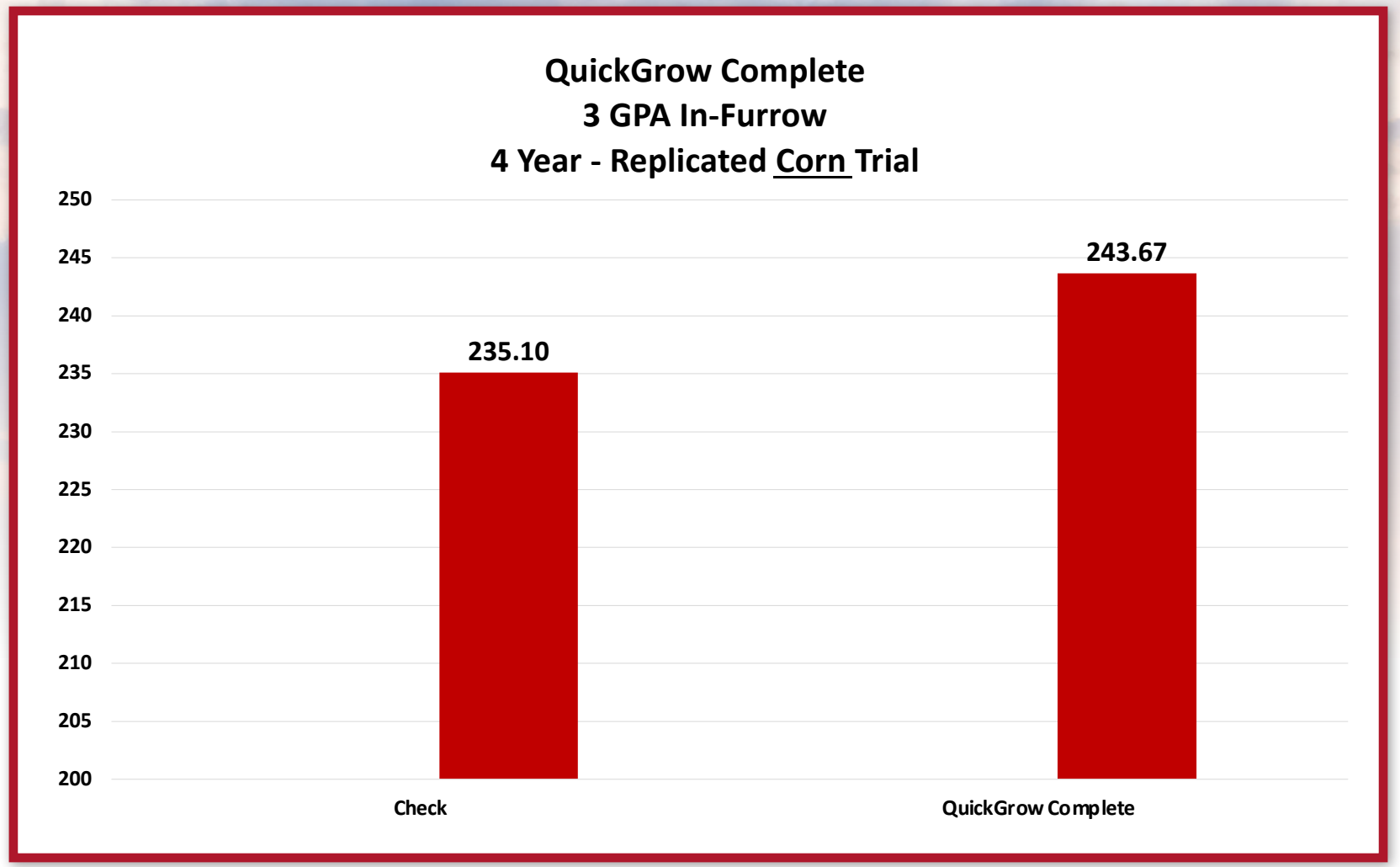

2024 Agri-Tech Consulting
QuickGrow FurrowJet In-Furrow Corn
4 Replications
245
243
241
239
237
235
233
231
229
227
225
230.34
240.59
238.65
243.32
244.61
Check
QG Complete 3 GPA
QuickGrow LTE 5 GPA
LTE & BioMarc 5.25 GPA
LTE & MicroPack 5.25 GPA


2018-2024 Agri-Tech Consulting
7 Year BioMarc Trial Corn
4 Replications
235
230
225
220
215
210
220.12
227.37
233.23
Check
QuickGrow LTE 5 GPA
LTE & BioMarc 5.25 GPA


2017-2024 Agri-Tech Consulting
8 Year MicroPack Trial Corn
4 Replications
230
228
226
224
222
220
218
216
214
212
210
217.92
224.34
229.94
Check
QuickGrow LTE 5 GPA
LTE & MicroPack 5.25 GPA


2024 Agri-Tech Consulting
QuickGrow FJ Wings (Complete FJ Center) Soybeans
4 Replications
71
69
67
65
63
61
59
57
55
61.37
69.32
66.1
68.24
66.98
Check
QuickGrow LTE 8 GPA
LTE & MicroPack 5.25 GPA
LTE & BioMarc 5.25 GPA
QG Complete 3 GPA

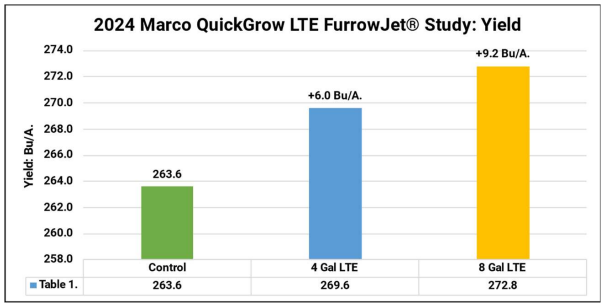

QuickGrow Complete
3 GPA In-Furrow
4 Year - Replicated Soybean Trial
79
78
77
76
75
74
73
72
71
73.89
78.32
Check
QuickGrow Complete


QuickGrow Complete
3 GPA In-Furrow
4 Year - Replicated Corn Trial
250
245
240
235
230
225
220
215
210
205
200
235.10
243.67
Check
QuickGrow Complete

2024 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 rates of 4, 6 and 8 Gal/A. applied in an at-plant 3-way FurrowJet® system. QuickGrow LTE is a 70% polyphosphate and 30% orthophosphate formulation of nitrogen, phosphorus, potassium, sulfur, and 9% Zn.



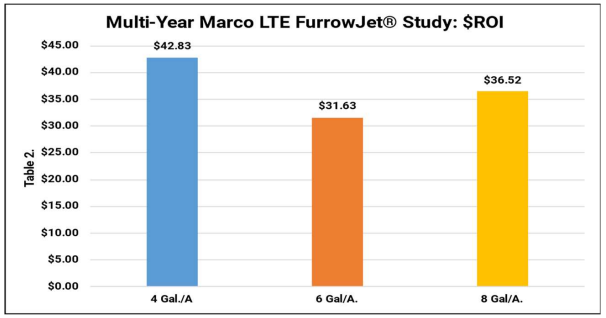
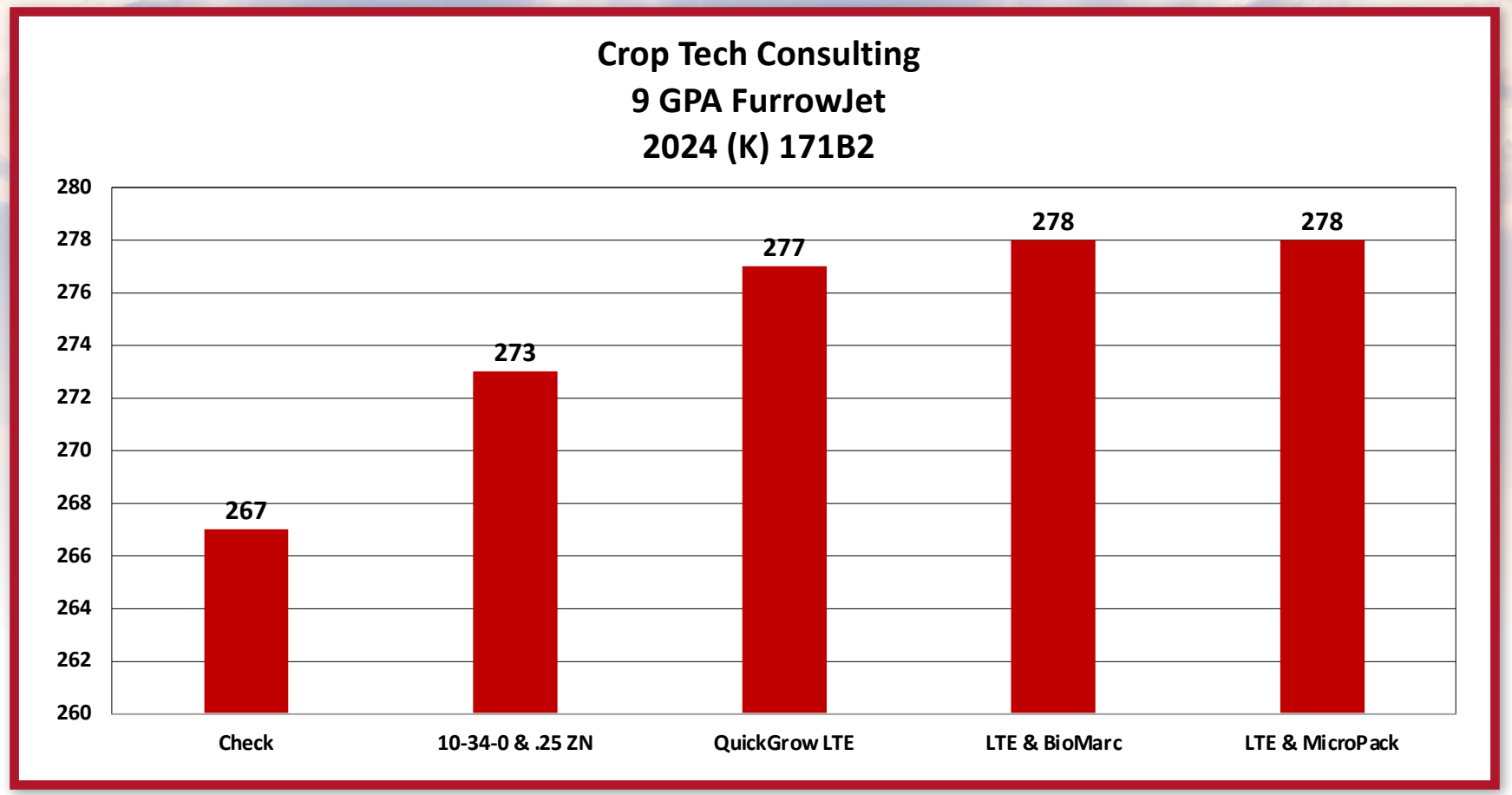


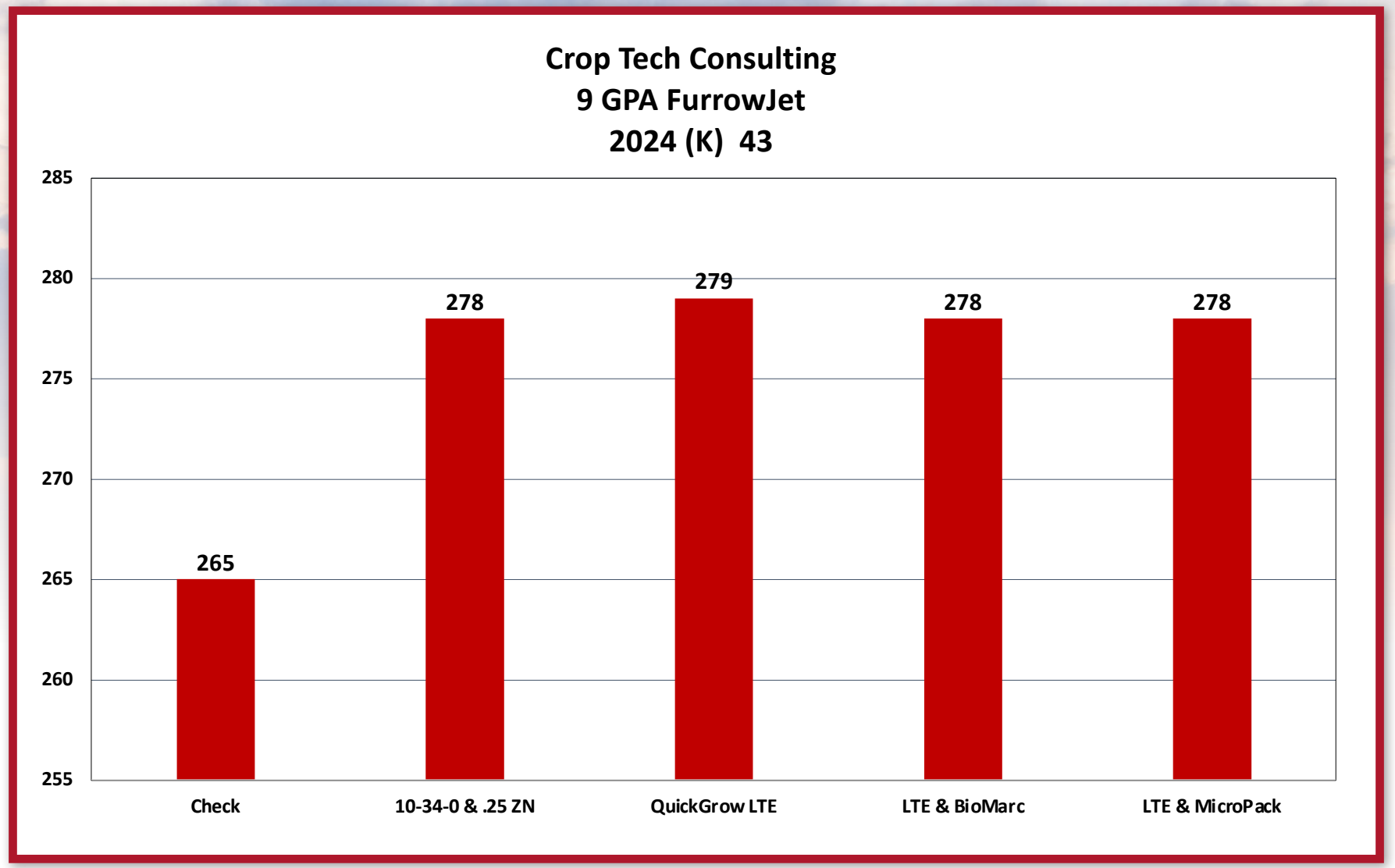
Figure 1. FurrowJet® Placement

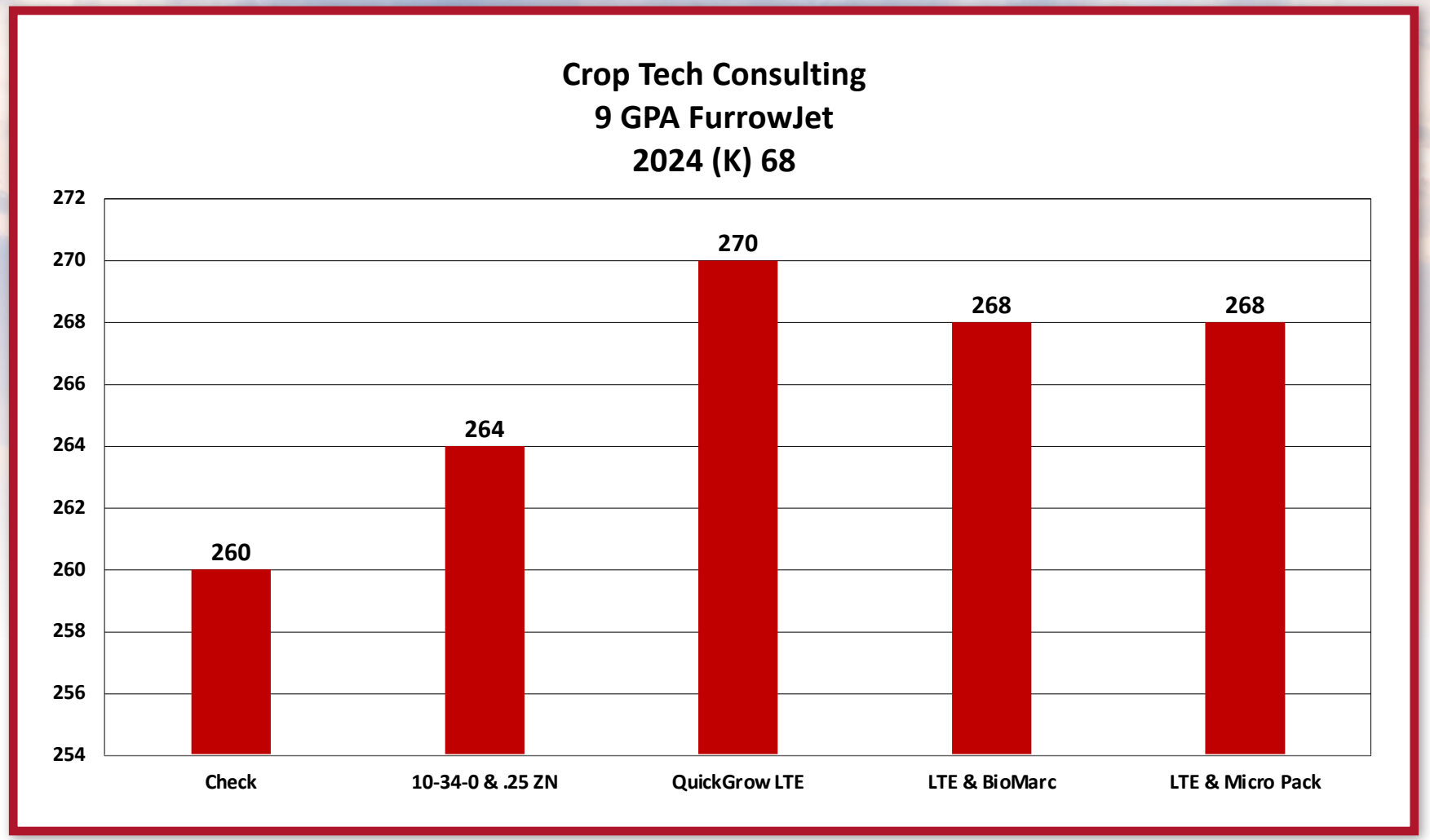
Results: Table 1. illustrates all rates of Marco QuickGrow LTE resulted in positive yield gains. However, 8 Gal/A. rates achieved agronomic optimum rate, with yield gains of +9.2 Bu/A. and net returns of +$30.74/A. The 4 Gal/A. rate proved yield gains of +6.0 Bu/A., with corresponding return on investment of +$36.08/A.

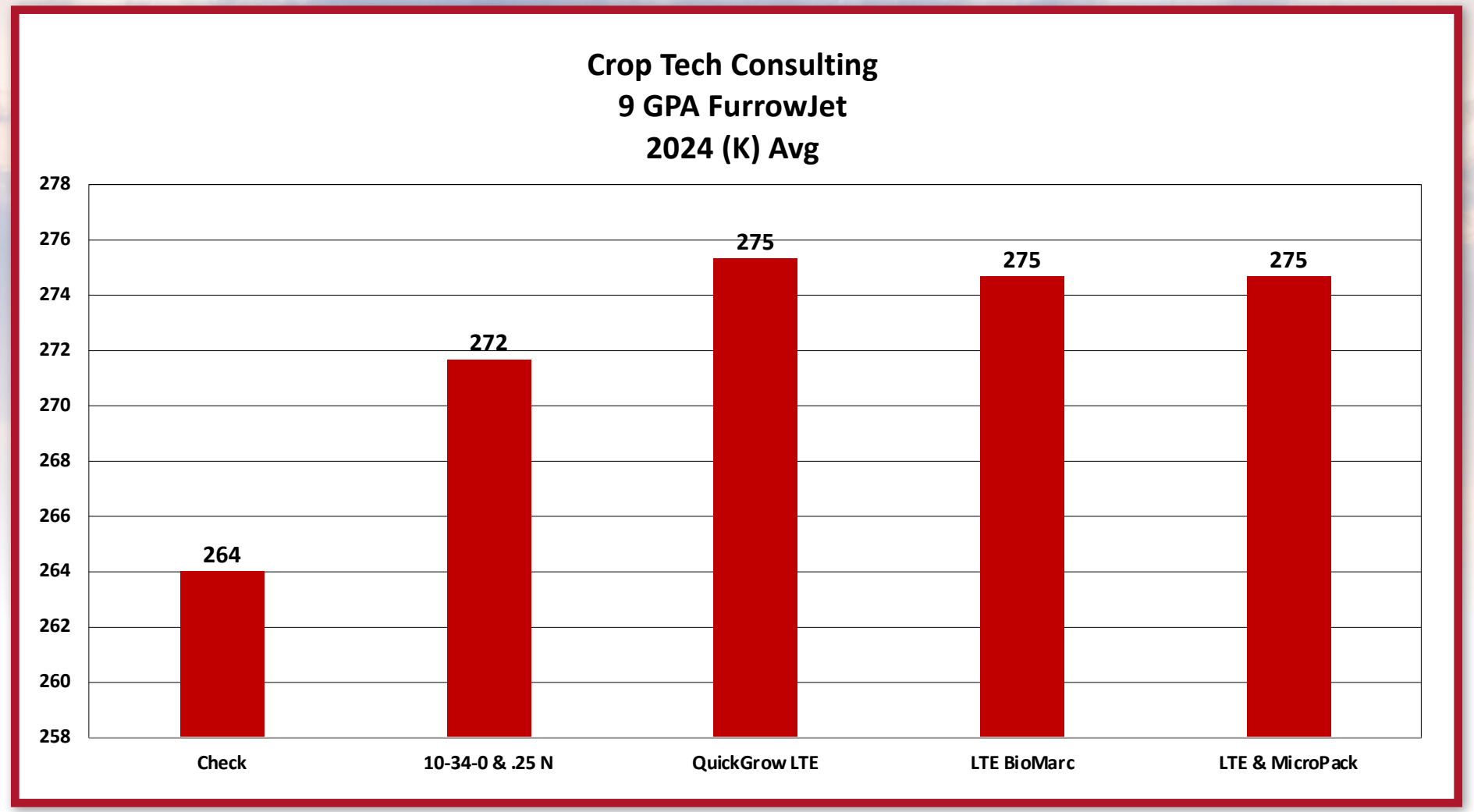
Table 2. summarizes multi-year data, indicating 4 Gal/A. being economic optimum rate over the 2019 to 2024 time-period. All applications are implemented with a $30/A. reallocation.

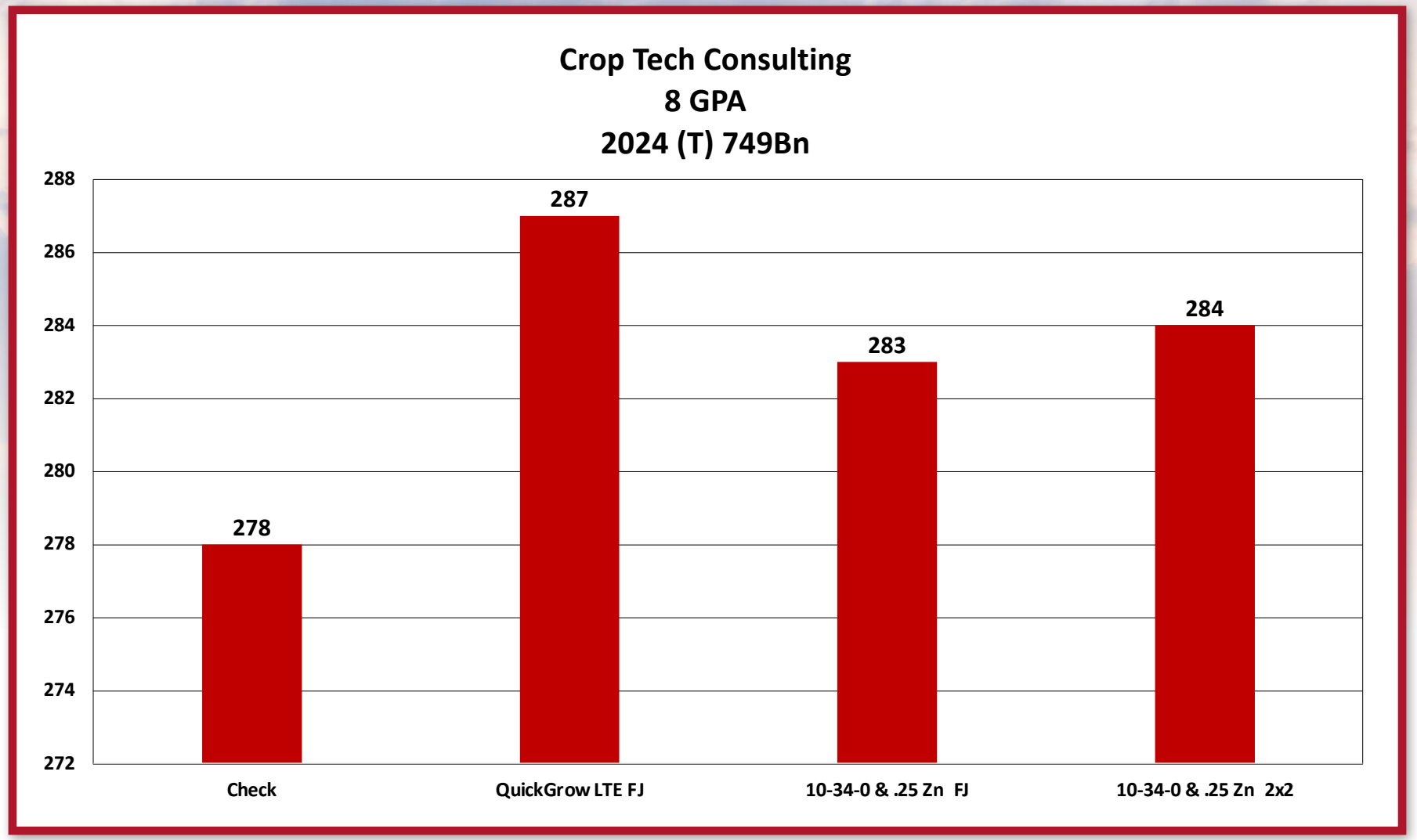
Planting Date: April 27th Hybrid: GH 15J91 Population: 36K Row Width: 30" Rotation: CAB Corn Price: $4.08 LTE $4.60/Gal $30 Fert. Reallocation

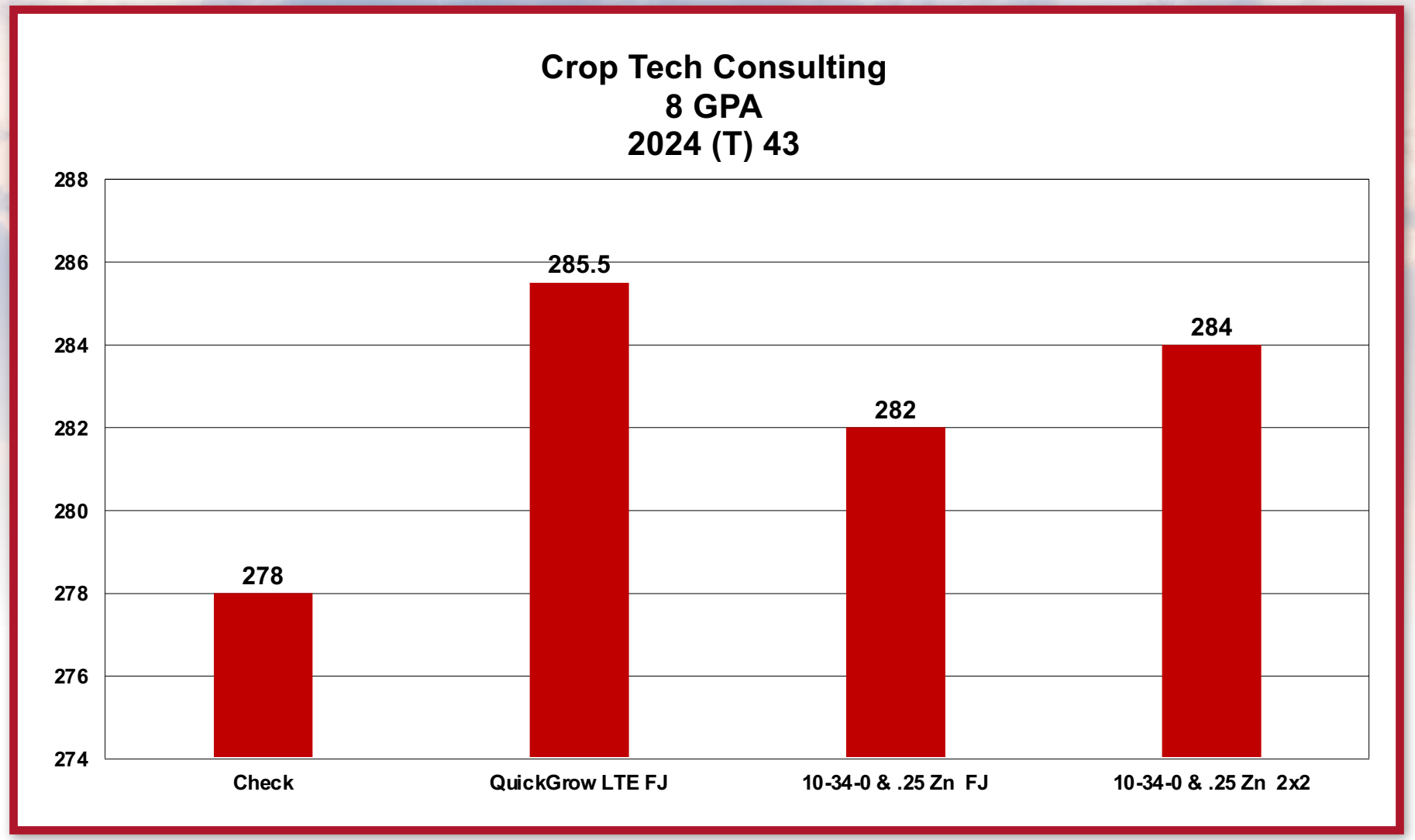

Crop Tech Consulting
9 GPA FurrowJet
2024 (K) 171B2
280
278
276
274
272
270
268
266
264
262
260
267
273
277
278
278
Check
10-34-0 & .25 ZN
QuickGrow LTE
LTE & BioMarc
LTE & MicroPack

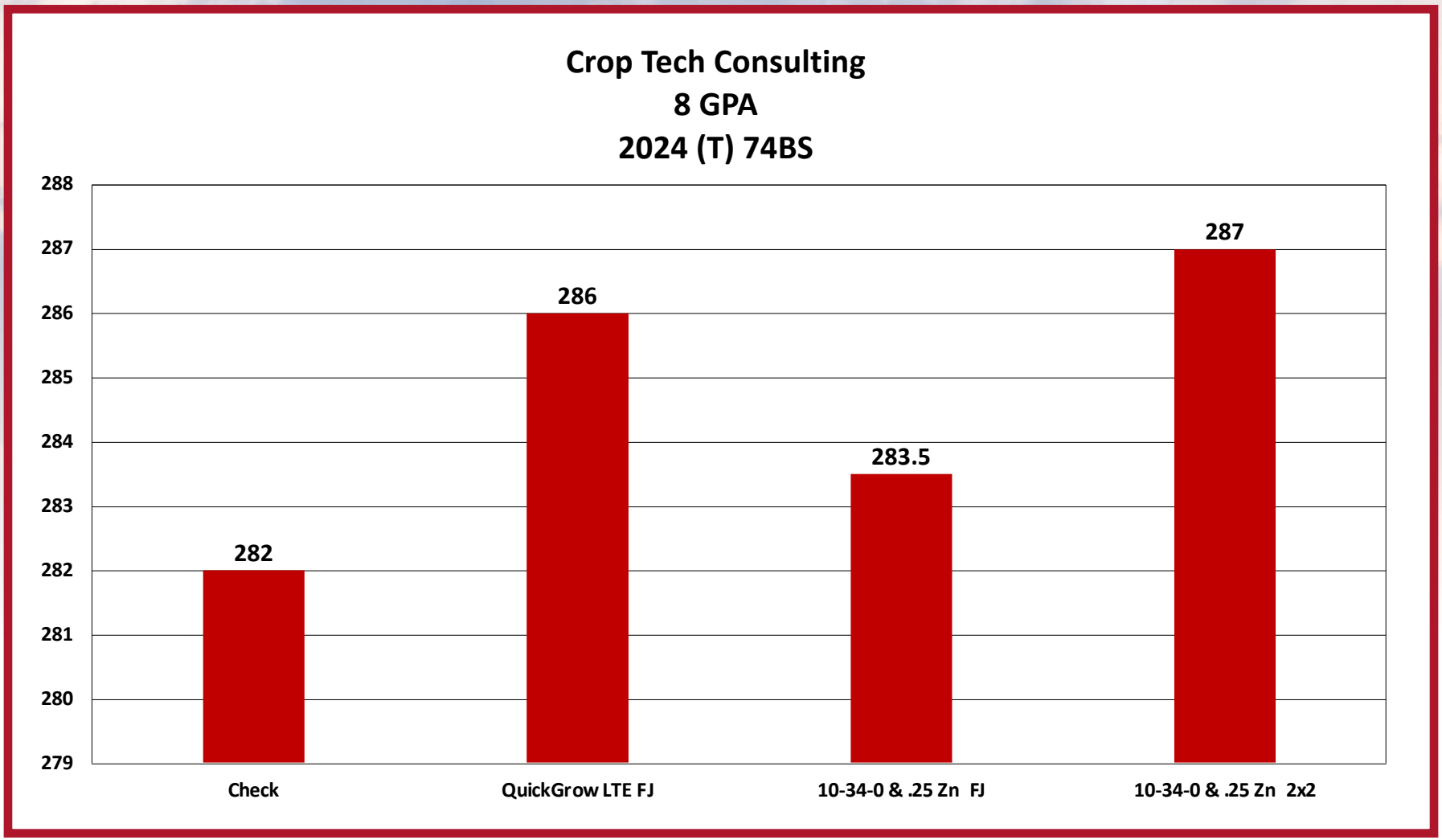

Crop Tech Consulting
9 GPA FurrowJet
2024 (K) 43
285
280
275
270
265
260
255
265
278
279
278
278
Check
10-34-0 & .25 ZN
QuickGrow LTE
LTE & BioMarc
LTE & MicroPack

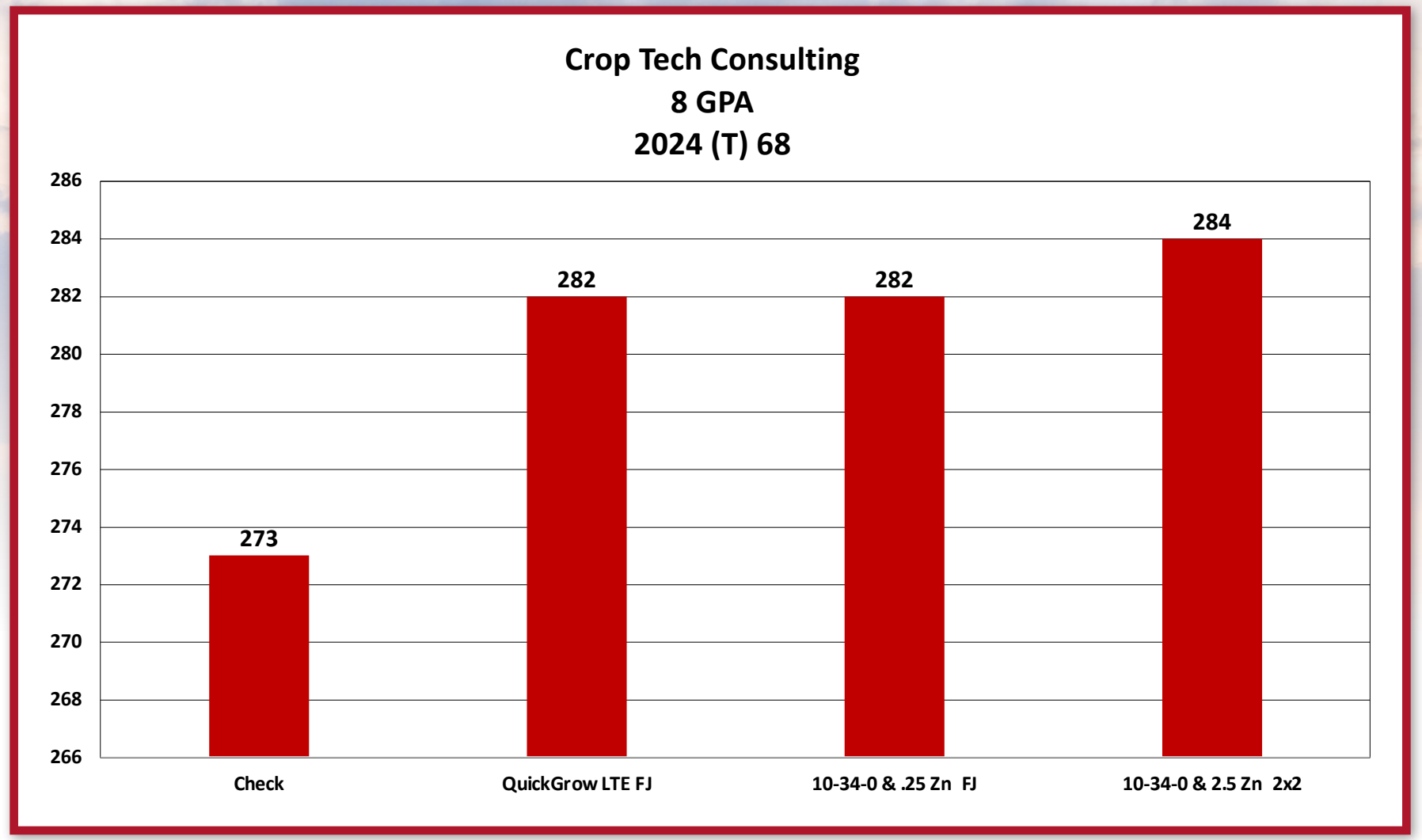

Crop Tech Consulting
9 GPA FurrowJet
2024 (K) 68
272
270
268
266
264
262
260
258
256
254
260
264
270
268
268
Check
10-34-0 & .25 ZN
QuickGrow LTE
LTE & BioMarc
LTE & Micro Pack

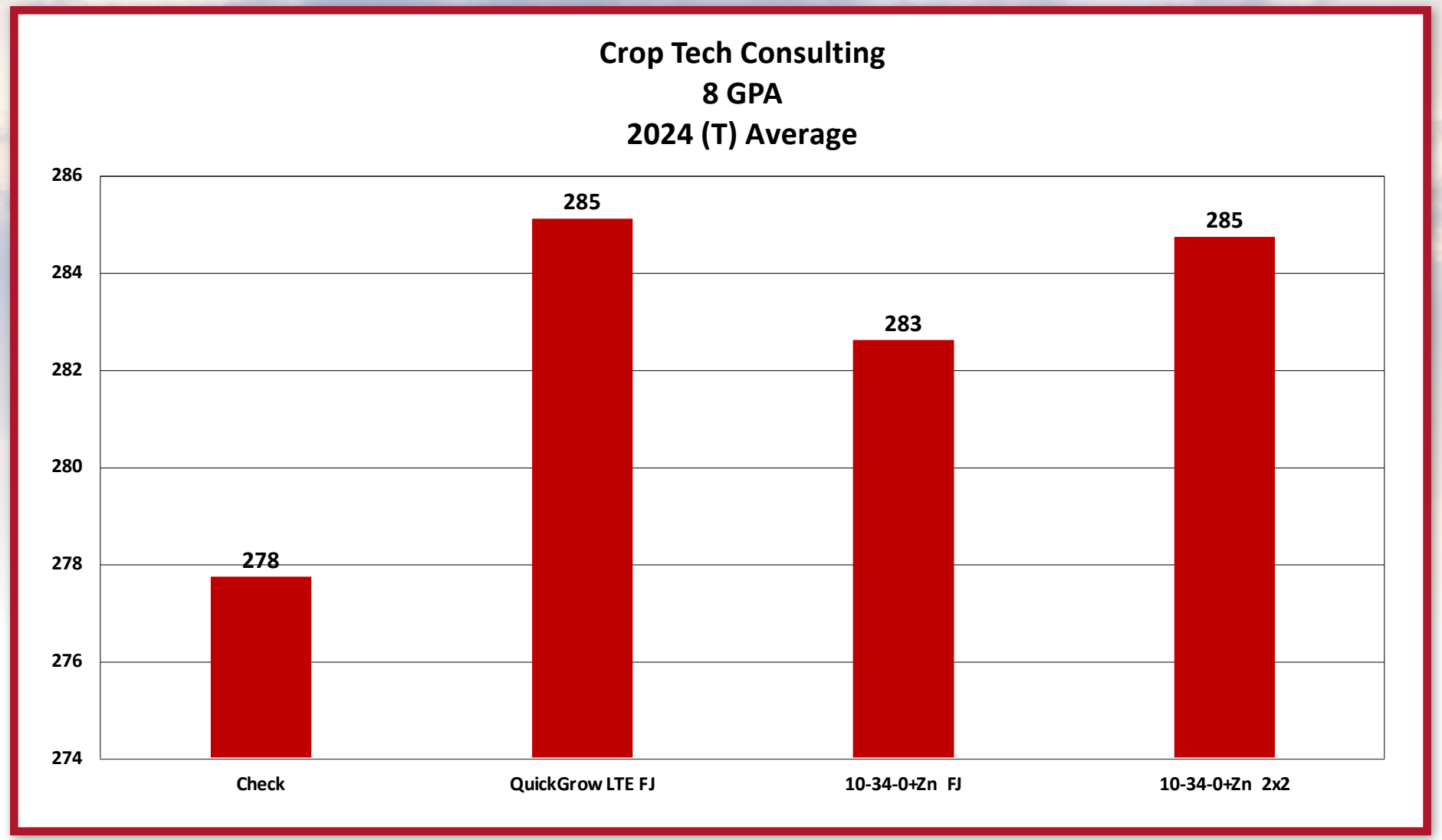

Crop Tech Consulting
9 GPA FurrowJet
2024 (K) Avg
278
276
274
272
270
268
266
264
262
260
258
264
272
275
275
275
Check
10-34-0 & .25 N
QuickGrow LTE
LTE BioMarc
LTE & MicroPack


Crop Tech Consulting
8 GPA
2024 (T) 749Bn
288
286
284
282
280
278
276
274
272
278
287
283
284
Check
QuickGrow LTE FJ
10-34-0 & .25 Zn FJ
10-34-0 & .25 Zn 2x2


Crop Tech Consulting
8 GPA
2024 (T) 43
288
286
284
282
280
278
276
274
278
285.5
282
284
Check
QuickGrow LTE FJ
10-34-0 & .25 Zn FJ
10-34-0 & .25 Zn 2x2


Crop Tech Consulting
8 GPA
2024 (T) 74BS
288
287
286
285
284
283
282
281
280
279
282
286
283.5
287
Check
QuickGrow LTE FJ
10-34-0 & .25 Zn FJ
10-34-0 & .25 Zn 2x2


Crop Tech Consulting
8 GPA
2024 (T) 68
286
284
282
280
278
276
274
272
270
268
266
273
282
282
284
Check
QuickGrow LTE FJ
10-34-0 & .25 Zn FJ
10-34-0 & 2.5 Zn 2x2


Crop Tech Consulting
8 GPA
2024 (T) Average
286
284
282
280
278
276
274
278
285
283
285
Check
QuickGrow LTE FJ
10-34-0+Zn FJ
10-34-0+Zn 2x2

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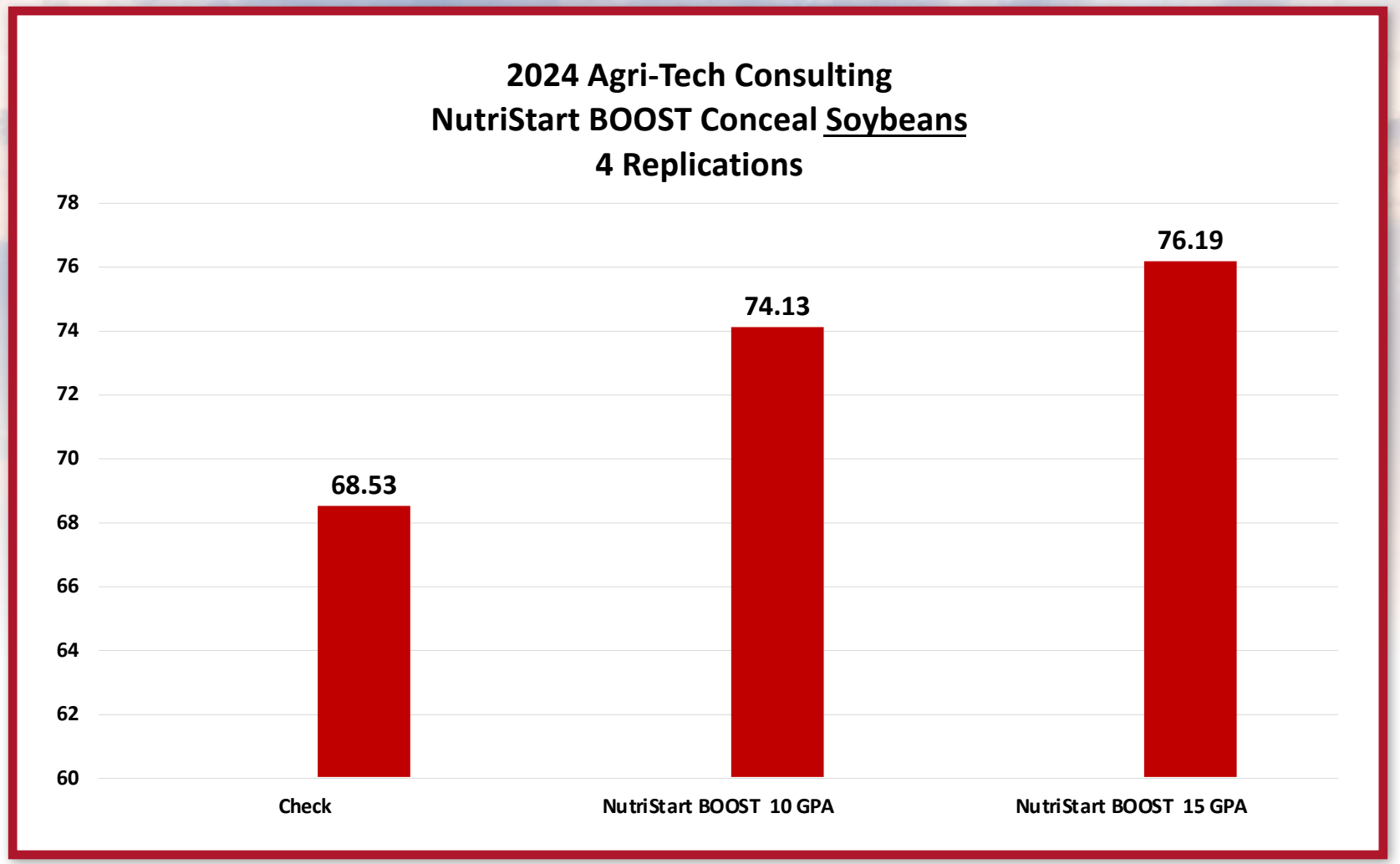
NutriStart


2024 Agri-Tech Consulting
NutriStart BOOST Conceal Soybeans
4 Replications
78
76
74
72
70
68
66
64
62
60
68.53
74.13
76.19
Check
NutriStart BOOST 10 GPA
NutriStart BOOST 15 GPA

Precision Planting®

2024 PTI Results

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

Objective: This trial evaluates the yield and net return of Conceal® system dual band treatments of NutriStart BOOST 14-12-12-4-6S at 15 Gal/A. rate. 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 Thiosulfate and Zinc - 9% EDTA.

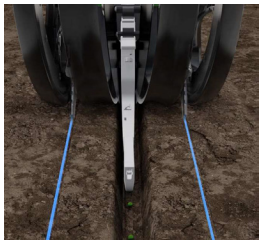
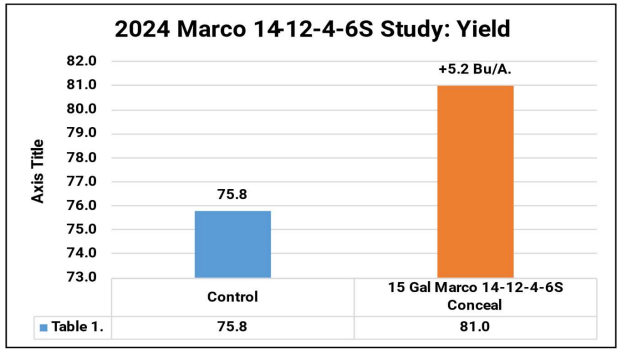
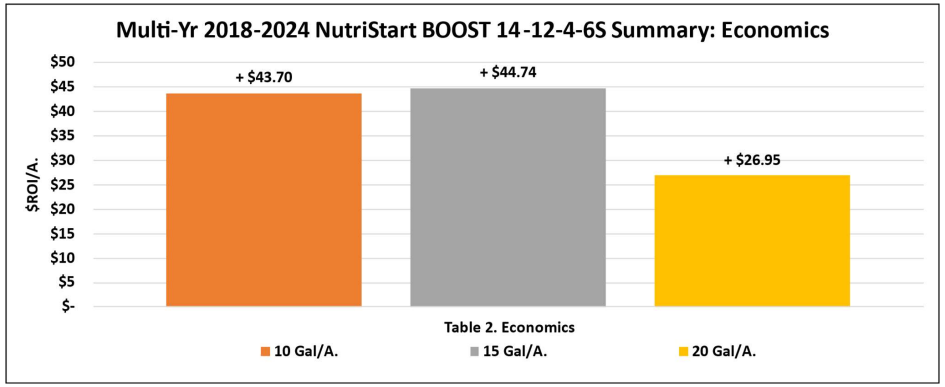


Figure 1. Conceal® Dual Placement



Results: Table 1. illustrates that 14-12-4-6S proved positive yield gains of 5.2 Bu/A. at 15 Gal resulting in an economic gain of +$31.84/A. Multi-year data shows 15 Gal/A. proving the highest economic return at +$44.74/A.



Planting Date: April 24th Variety: AG 35XF3 Population: 120K Row Width: 30" Rotation: BAC SB Price: $11.46 BOOST 14-12-4-6: $3.85/Gal

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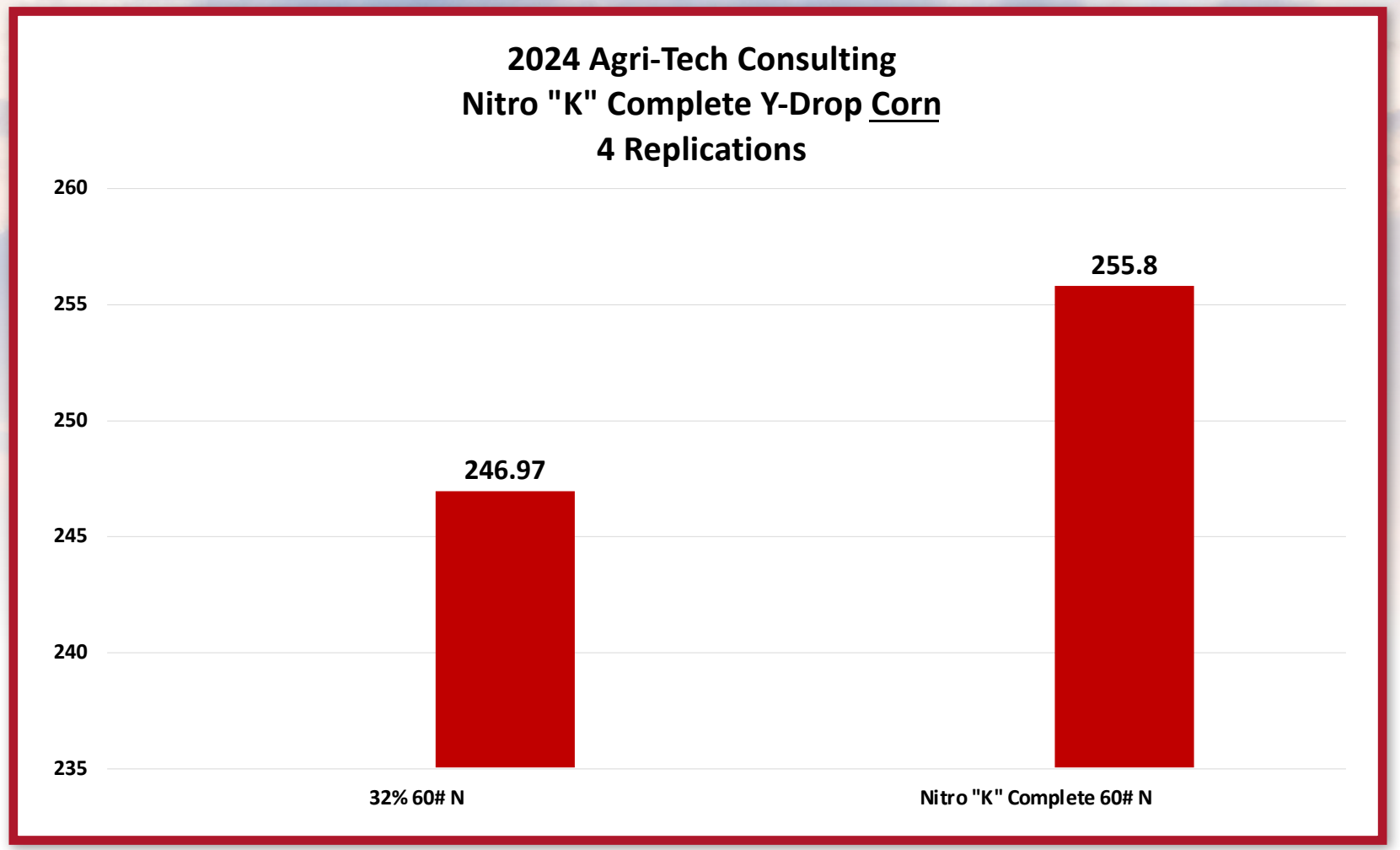
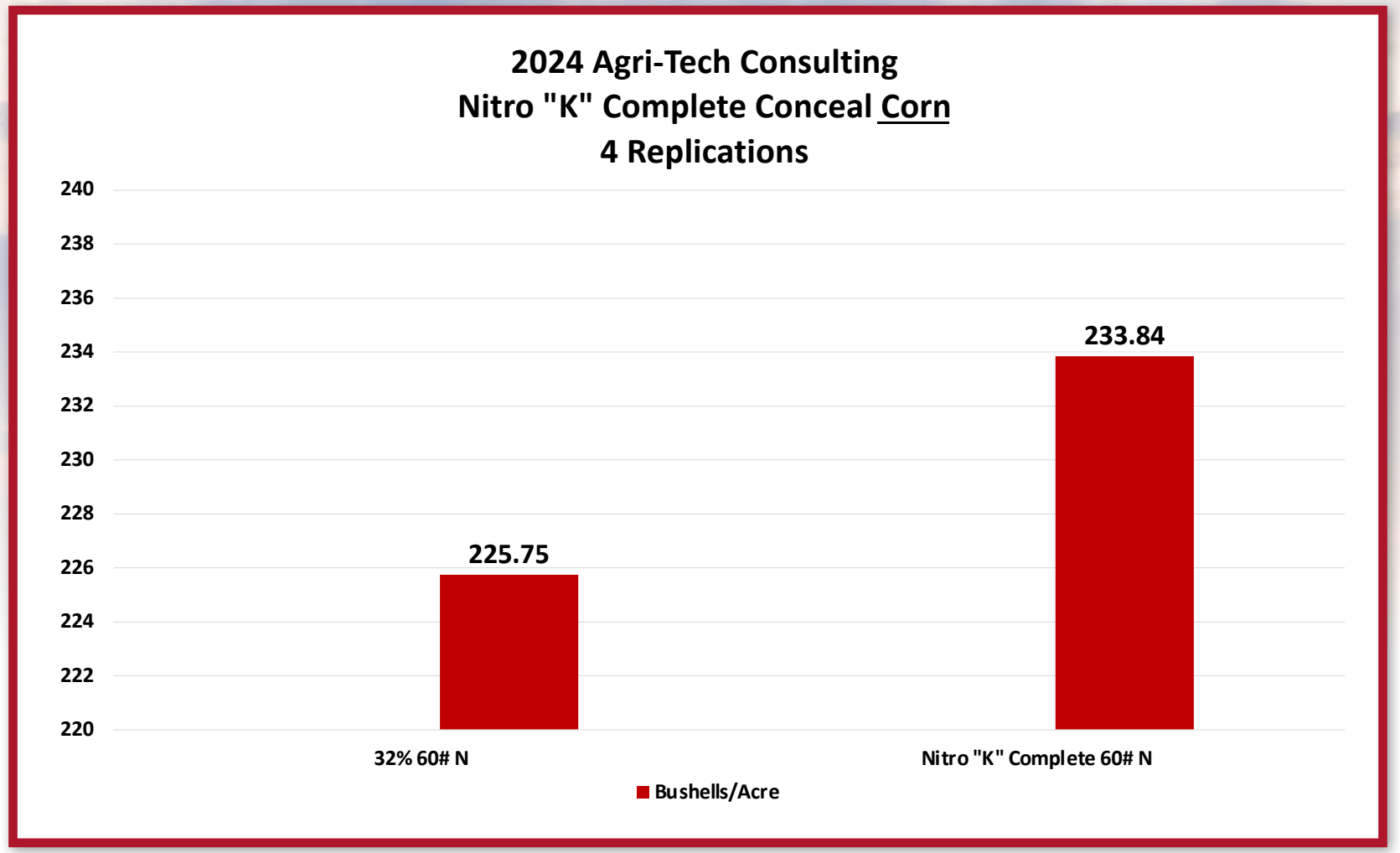
Nitro "K"


2024 Agri-Tech Consulting
Nitro "K" Complete Y-Drop Corn
4 Replications
260
255
250
245
240
235
246.97
255.8
32% 60# N
Nitro "K" Complete 60# N


2024 Agri-Tech Consulting
Nitro "K" Complete Conceal Corn
4 Replications
240
238
236
234
232
230
228
226
224
222
220
225.75
233.84
32% 60# N
Nitro "K" Complete 60# N
Bushells/Acre

2024 Precision Planting PTI Farm High-Yield Trials

Precision Planting®

2024 PTI Results

Marco Fertilizer High Management Irrigated Soybean Study

Objective: To evaluate the yield and economic impact of a soybean liquid starter fertilizer and foliar nutritional program from Marco Fertilizer in a high management irrigated environment. This trial consisted of the following:

Treatments and Placement:

#1. Control:	150# 18-46-0,125# 0-0-60, R1 Miravis®Top
#2 At-Plant Fertility:	
Conceal® Dual Band (Figure 1.)	1 Pt Soil Assist
	3 Gal QuickGrow Complete
FurrowJet® Wings: (Figure 2.)	1 oz MycoBoost

#3 Foliar Applications:

MARCO Liquid Fertility

V3: 20 oz Energizer, 1 Pt Iron Plus

R1: 2# Nutri Complete, 2oz Poseidon, 1 Pt Energizer, 1 Qt Calcium Plus

R4: 2.5 Gal Finisher

Figure 1. Conceal® Placement

Figure 2. FurrowJet® Placement

Precision Planting®

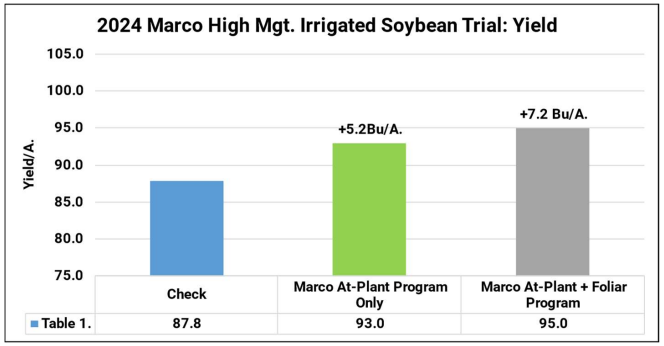
2024 PTI Results

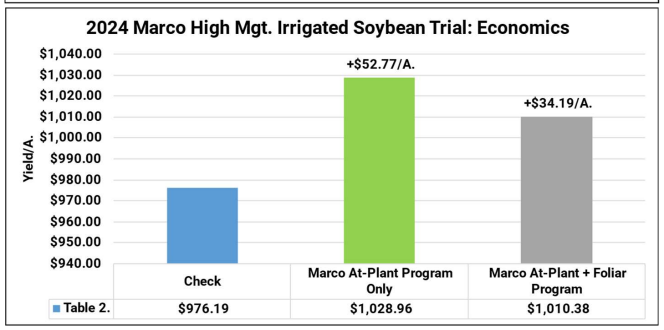
Marco Fertilizer High Management Irrigated Soybean Study

Irrigation consisted of 5.00" of rain throughout the growing season and all treatments received fungicide applications of 13.7oz/A. Miravis® Top at R1 and 13.7oz/A. Miravis®Neo at R3 growth stages.

Results: At-Plant FurrowJet® and Conceal® treatments resulted in yields of 93 Bu/A., +5.2 Bu/A. over the control. At-plant + foliar combination treatments pushed yield to 95 Bu/A., +7.2 Bu/A. over the control.

After all costs, at-plant nutritional treatments proved economic gains of +$52.77/A. Adding the foliar treatments to at-plant applications tallied economic gains of +$34.19/A.





Planting Date: May 9th Variety: GH 3035E3 Population: 120K Row Width: 30 " Rotation: BAC SB Price: $11.46 Irrigation: $40/A.

At-Plant Program: $36.83/A. Foliar Program: $41.50/A $30 Fert Reallocation

Precision Planting®

2024 PTI Results

Marco Fertilizer High Management Dryland Soybean Study

Objective: To evaluate the yield and economic impact of a soybean liquid starter fertilizer and foliar nutritional program from Marco Fertilizer in a high management irrigated environment. This trial consisted of the following:

Treatments and Placement:

#1. Control:	150# 18-46-0, 150# 0-0-60, R3 Miravis®Top

#2 At-Plant Fertility:	
Conceal® Dual Band (Figure 1.)	1 Pt Soil Assist
	3 Gal QuickGrow Complete
FurrowJet® Wings: (Figure 2.)	1 oz MycoBoost

#3 Foliar Applications:

MARCO Liquid Fertility

V3: 20 oz Energizer, 1 Pt Iron Plus

R1: 2# NutriComplete, 2oz Poseidon,
1 Pt Energizer, 1 Qt Calcium Plus

R4: 2.5 Gal Finisher

Figure 1. Conceal® Placement

Figure 2. FurrowJet® Placement

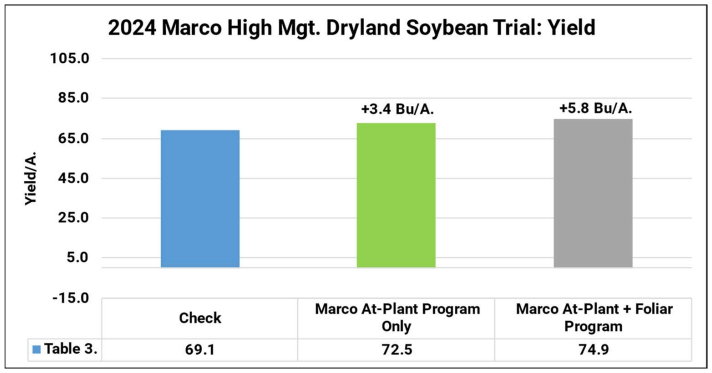
2024 PTI Results

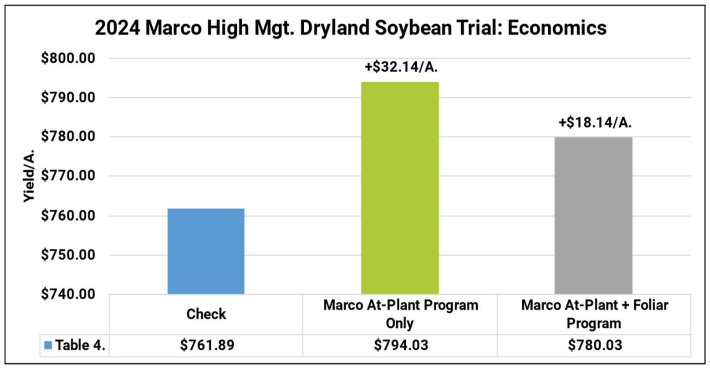
Marco Fertilizer High Management Dryland Soybean Study.

Irrigation consisted of 5.00" of rain throughout the growing season, and all treatments received fungicide applications of 13.7oz/A. Miravis® Top at R1 and 13.7oz/A. Miravis®Neo at R3 growth stages.

Results: : At-Plant FurrowJet® and Conceal® treatments resulted in yields of 72.5 Bu/A., +3.4 Bu/A. over the control. At-plant + foliar combination treatments pushed yield to 74.9 Bu/A., +5.8 Bu/A. over the control.

After all costs, at-plant nutritional treatments proved economic gains of +$32.14/A. Adding the foliar treatments to at-plant applications tallied economic gains of +$18.14/A.





Planting Date: April 13th Variety: GH 3035E Population: 120K Row Width: 30" Rotation: BAC SB Price: $11.46

At-Plant Program: $36.83/A. Foliar Program: $41.50/A. $30 Fert Reallocation

2024 PTI Results

Marco Fertilizer High Management Corn Study

Objective: To evaluate the yield and economic impact of a corn liquid starter fertilizer and foliar nutritional program from Marco Fertilizer in a high management dryland and irrigated environment. This trial consisted of the following:

Treatments and Placement:

#1. Control:	200# DAP, 200# 0-0-60, Less R3 Fungicide, Less 40# N
#2 At-Plant Fertility:	
Pre-Emerge:	16oz/A. Soil Assist
FurrowJet® 3-Way: (Figure 1.)	3 Gal/A. QuickGrow Complete
	1oz/A. MycoBoost with 3 Gal/A. Water
#3 Foliar Applications:	
MARCO Liquid Fertility	V4: 1 oz/A. Poseidon
	20 oz/A. Energizer
	1 pt/A. Iron Plus
	Post Herbicide
	V10: 1 oz/A. Poseidon
	20 oz/A. Energizer
	2# Foliar Complete
	5 gal/A. Y-MAXX
	VT: 20 oz/A. Energizer
	2# Foliar Complete
	32 oz/A. Calcium Plus
	R3: 2.5 gal/A. Finisher + 20 Gal/A. Water

Figure 1. FurrowJet® Placement

2024 PTI Results

Marco Fertilizer High Management Corn Study

All controls were planted at 36K seeding rates, while high management treatments were evaluated at 38k seeding rates using Golden Harvest 14B32. Control received -40# N (180# total N) and only one (VT) foliar fungicide pass, and 200# 18-46-0 and 200# 0-0-60.

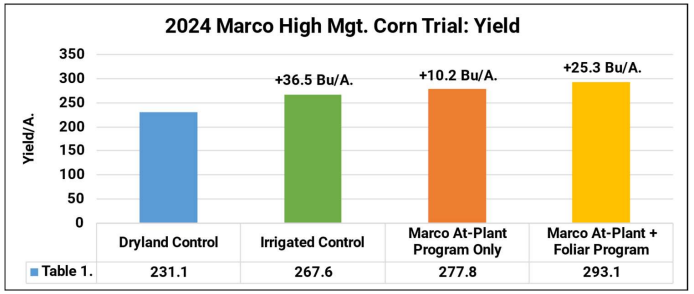
Irrigation on all treatments received 9.25" water throughout the growing season. High yield treatments received 13.7oz/A. of Miravis® Neo at VT and 13.7oz/A. of TrivaPro® at R3 growth stage, +40 additional N units and 30 Gal/A. plasma activated water conditioner.

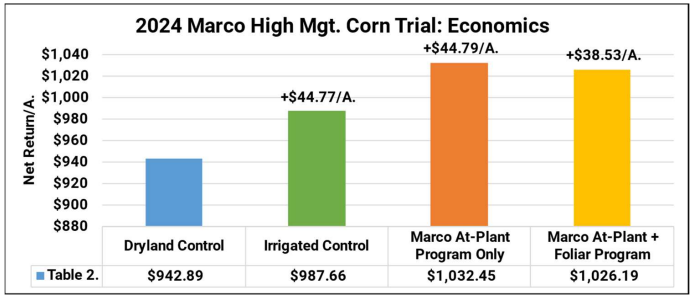
Results: Golden Harvest 14B32 posted highest yield of 293.1 in the combination irrigated/planter nutrition/and foliar program, +62.0 Bu/A. over the dryland control.

Irrigation itself resulted in individual gains in the study at +36.5 Bu/A. over the dryland control, resulting in net returns of +$44.77/A.

At-Plant treatments captured +10.2 Bu/A. gains with a positive return of +$44.79/A. over the irrigated control.

Combination at-plant and foliar treatments captured +25.3 Bu/A. gains, however positive economic gains of +$38.53/A. over the irrigated control.





Planting Date: May 9th *Hybrid: Golden Harvest 14B32* *Population: 36-38K* *Row Width: 30"* *Rotation: CAB* *Corn Price: $4.08*

At-Plant Conceal® and FurrowJet Program: $36.83/A. *Post Program: $68.69/A.* *Base Irrigation Program: $104.15/A.* *Fert Re-Allocation: $40/A.*


MARCO®
Liquid Fertility