



2022

Trial Results

"Nextgen is founded on research to boost your profits and increase yields. Having confidence in the products we offer means everything to us and our customers. Thank you to all who participated in this year's trials!" -Paul Beyer

Research Summary – Foliar Corn

1. Source – Sound Agriculture

- a. Formulated to reactivate the soil microbiome and provide access to more nitrogen and phosphorus. It's like caffeine for microbes and help you get more from your field. Can be added to increase yield or can replace up to 50lbs. of synthetic nitrogen. SOURCE is applied as a foliar spray and activates microbes at the root zone that fix atmospheric nitrogen and unlock phosphate. Crops get more nutrition at critical times throughout the season, leading to healthier plants, increased yield, and reduced reliance on synthetic fertilizer.

Field:	Source Corn	UTC	Source Corn	UTC	Source Corn	UTC	Average Yield Response
T-1	273.06	263.92	267.93	265.81	259.44	261.19	3.17
S. QTR.	265.48	259.64	225.6	226.87	297.8	295.5	2.29
H-Vern	193.08	193.4	209.99	192.38	184.11	186.78	4.87

Summary of 3 fields on two different farms adding Source at V5 in addition to normal fertility.
*\$7.25 Corn

Cost	Yield +	ROI*
\$12/Acre	3.44	\$12.94

2. SP-1 Classic – DPH Biologicals

- a. A liquid biofertilizer comprised of a diverse community of microbes, plant-based humus extracts and algae, that work together to improve soil structure, make more nutrients available and ultimately increase yield.

Field:	SP-1	UTC	SP-1	UTC	SP-1	UTC	Average Yield Response
20S	281.25	283.82	298.53	278.26	286.86	294	
20S	313.95	299.1	311.21	291.61	332.56	299.62	12.99
SM-18	163.76	146.52	132.27	125.91	123.45	125.6	7.15

Summary of 2 fields on two different farms adding SP-1 at V6 broadcast application at 3 gal/acre.
*\$7.25 Corn

Cost	Yield +	ROI*
\$22/Acre	10.07	\$51.01

3. Smart KB – Brandt Consolidated

- a. Specifically formulated for foliar delivery of potassium and boron in many crops. Apply 1-2 quarts per acre per application throughout the growing season. More frequent applications at 1 pint per acre may be needed to correct deficiencies once they occur. SMART K B is a new high efficiency foliar potassium formulation in the top-selling BRANDT® SMART SYSTEM® product line. It is a 2-0-16 formulation with a spike of boron and is ideal for in-season nutrient applications.

Field:	Smart KB	UTC	Smart KB	UTC	Smart KB	UTC	Average Yield Response
7	277.93	262.84	264.18	275.78	267.12	260.74	3.29
12	284.27	279.62	278.89	262.15	294.89	297.51	6.26
28	271.85	270.09	263.75	271.67	262.94	250.74	2.01

Summary of 3 fields on three different farms adding Smart KB at R1 with fertigation pass at 2qts./acre
*\$7.25 Corn

Cost	Yield +	ROI*
\$14.75/Acre	3.85	\$13.16

4. Ingrained – Trace Minerals

- a. Uniquely designed to provide bioavailable nutrients. This foliar product is stable and electronegatively neutral, allowing nutrients to pass directly into the plant with amino acid chelation. Mixes with anything.

Field:	Ingrained	UTC	Ingrained	UTC	Ingrained	UTC	Average Yield Response
V-1	193.28	209.99	203.57	203.76	206.22	189.28	0.01
13	205.3	199.9	190.29	186.98	205.2	204.21	1.23
Otis	207.04	200.95	199.6	199.82	200.32	205.37	0.27
Rock	204.08	204.57	204.52	198.29			2.87

Summary of 4 fields on four different farms adding Ingrained at V6 with broadcast pass at 1qt./acre
*\$7.25 Corn

Cost	Yield +	ROI*
\$10.25/Acre	1.1	-\$2.28

5. FertiRain – AgroLiquid

- a. Flavonol polymer technology allows for the release of nutrients consistently and provide a risk-free foliar option. Well balanced micro package with enhanced foliar uptake.

Field:	FertiRain	UTC	FertiRain	UTC	FertiRain	UTC	Average Yield Response
GF10	203.67	206.95	205.2	201.96	212.66	204.43	2.73
JN	204.96	204.57	208.2	198.25	207.78	204.3	4.61

Summary of 3 fields on two different farms adding Ferti-Rain at V10 with fertigation pass at 1.5gals/acre
*\$7.25 Corn

Cost	Yield +	ROI*
\$14/Acre	3.67	\$12.61

Research Summary – Foliar Soybeans

1. Source – Sound Agriculture

- a. Formulated to reactivate the soil microbiome and provide access to more nitrogen and phosphorus. It's like caffeine for microbes and help you get more from your field. Can be added to increase yield or can replace up to 50lbs. of synthetic nitrogen. SOURCE is applied as a foliar spray and activates microbes at the root zone that fix atmospheric nitrogen and unlock phosphate. Crops get more nutrition at critical times throughout the season, leading to healthier plants, increased yield, and reduced reliance on synthetic fertilizer.

Field:	Source Soybean	UTC	Source Soybean	UTC	Source Soybean	UTC	Average Yield Response
W-M Pap	85.8	87.01	83.51	81.16	85.18	82.23	1.36
W-M Pap	82.53	85.01	85.15	80.64	78.99	77.82	1.07

Summary of 2 fields on one farm adding Source at R1 broadcast

*\$13.00 Soybean

Cost	Yield +	ROI*
\$11/Acre	1.22	\$4.86

2. FertiRain/Sure-K – AgroLiquid

- a. Flavonol polymer technology allows for the release of nutrients consistently and provide a risk-free foliar option. Well balanced micro package with enhanced foliar uptake with additional potassium for flowering and pod development.

Field:	FertiRain/Sure-K	UTC	FertiRain/Sure-K	UTC	FertiRain/Sure-K	UTC	Average Yield Response
EE-South	83.77	75.61	87.01	84.8	79.95	70.65	6.56
Q-East	76.58	68.41	62.5	59.08	63.84	60.55	4.96

Summary of 2 fields on one farm adding 2gal/Acre of Ferti-Rain and 1 gal Sure-K at R1 broadcast

*\$13.00 Soybean

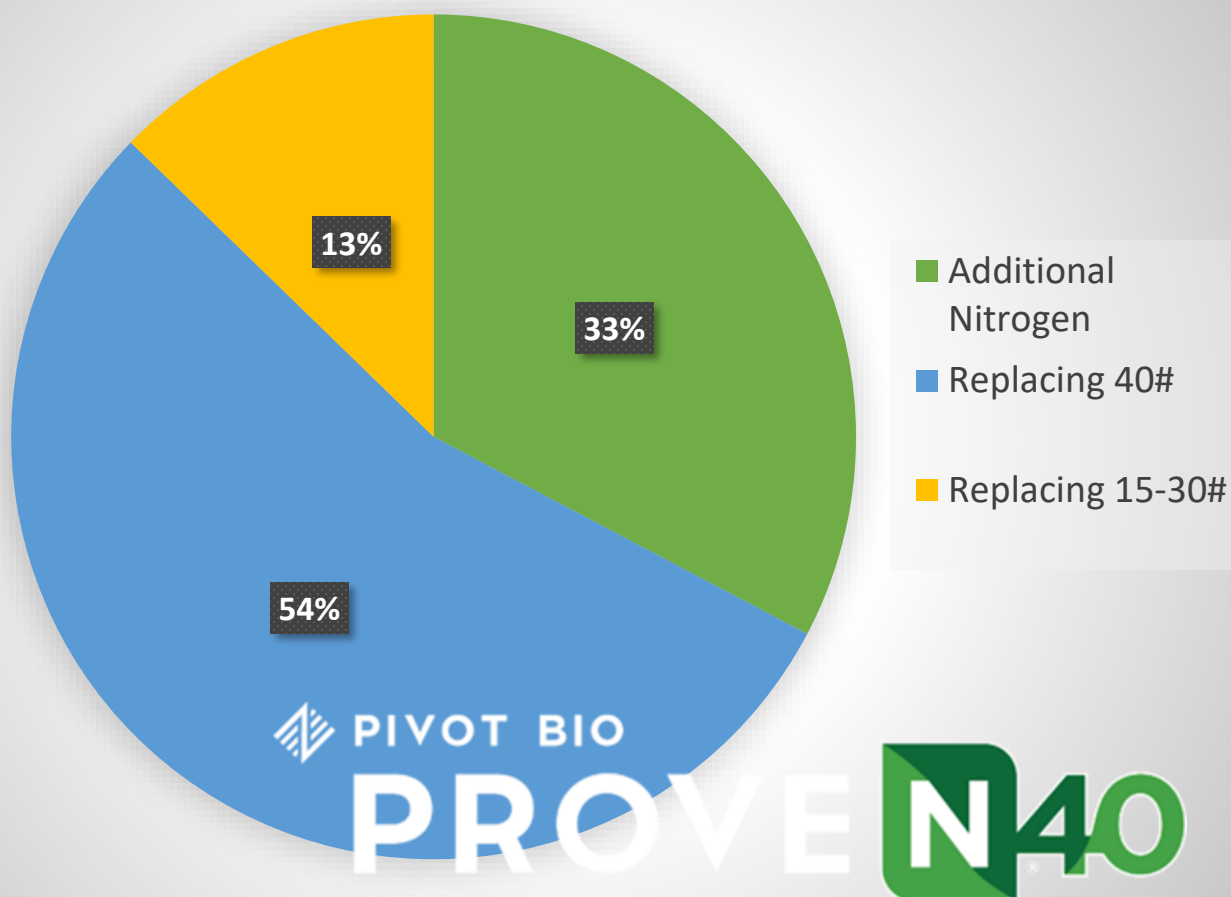
Cost	Yield +	ROI*
\$28/Acre	5.76	\$46.88

Research Summary – Pivot Bio Corn

1. Proven 40 – Pivot Bio

- a. Pivot Bio PROVEN is the only microbial product available to U.S. corn growers that applies nitrogen everyday throughout the growing season and totals up to 40#, with peak nitrogen production when the crops need it the most. Applied at planting, the microbes adhere to the corn roots so growers can be confident their corn is getting a consistent daily source of nitrogen. Unlike traditional nitrogen, Pivot Bio PROVEN does not leach when it rains.
- b. Not only did we have a large portion of trials focused on Proven 40, but Pivot Bio themselves conducted the all-time largest single season in-plant nitrogen data collection ever in the world. To view their results, go to their website at pivotbio.com and view over 2,000 customer fields in over 34 states totaling 1.3 million acres.

Nitrogen Approach from over 30 Farms



2. Pivot Bio cont.

a. Additional Nitrogen (on top of normal nitrogen program)

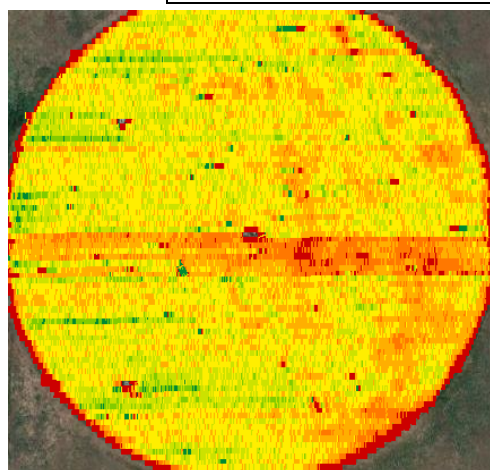
i. 33% of Nextgen Customer Acres

	P40	UTC	P40	UTC	P40	UTC	Average Yield Response
Farm A	234.87	233.98	233.08	227.51	232.98	227.51	3.98
Farm A	230.5	229.6	246.07	238.13	238.91	232.79	4.99
Farm A	260.03	250.42	245.02	243.86	263.55	262.73	3.86
Farm A	205.6	198.2	208.64	210.48	214.6	205.4	4.92
Farm B	334.79	332.22	318.45	314.22			3.40
Farm C	222.68	193.22	181.37	180.97	226.34	208.55	15.88
Farm C	197.98	197.3	213.17	175.57	193.65	170.46	20.49
Farm D	26.87	25.9	25.87	26.18	25.16	23.54	0.76
Farm E	185.3	181.72	199.81	201.83	188.78	176.67	4.56
Farm F	249.33	243.49	243.78	251.32	278.64	252.64	8.10
Farm F	339.06	267.87	254.84	273.87	240.35	275.63	5.63
Farm F	267.11	260.77	267.71	261.42	265.51	262.77	5.12
Farm G	163.59	150.34	165.03	149.68			14.30
Farm H	250.91	244.69	292.43	266.87	269.67	272.3	9.72
Farm I	224.9	225.6	226.6	222	225.7	222	2.53
Farm I	252.6	257.3	255.8	257.3	254.3	247.9	0.07

Summary of 16 fields on nine farms adding Proven 40 in-furrow in addition to normal nitrogen program- Averages corrected by excluding outliers.

*\$7.25 Corn

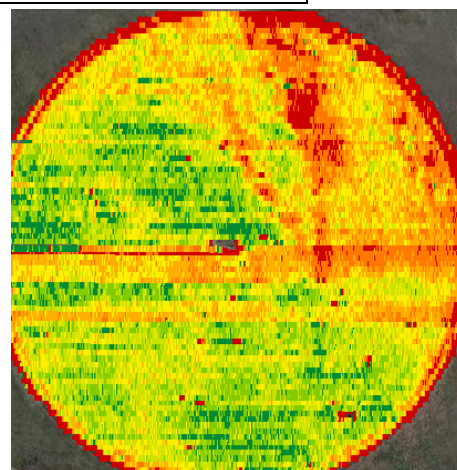
Average Cost	Yield +	ROI*
\$22/Acre	5.4	\$17.15



Two examples of test strips that showed in yield maps. "While this wasn't every field it brought a lot of confidence to the future of Nitrogen."

} Check Strips {

*"This was astonishing to see."
-Yuma County Customer*



3. Pivot Bio cont.

a. Replacing 40# of synthetic nitrogen

i. 54% of Nextgen Customer Acres

	P40	UTC	P40	UTC	P40	UTC	Average Yield Response
Farm A	259.91	265.07	279.69	284.71	258.16	252.6	-1.54
Farm A	301.44	298.56	290.56	292.58	298.06	297.43	0.50
Farm B	210.44	219.37	209.58	206.5	221.18	210.46	1.62
Farm B	84.8	87.01	83.51	81.16	85.18	82.82	0.83
Farm C	78.53	85.01	85.15	80.64	78.99	77.82	-0.27
Farm C	218.87	226.4	222.79	214.13			0.56
Farm C	255.21	232.83	247.47	260	286.18	276.45	6.53
Farm D	241.27	235.24	239.22	232.39	228.05	231.81	3.03
Farm E	203.04	191.59	183.93	187.62			3.88
Farm F	219.69	219.83	222.56	228.02	221.78	225.64	-3.15
Farm G	216.54	219.83	222.56	228.02	221.78	225.64	-4.20

Summary of 11 fields on seven farms adding Proven 40 in-furrow and reducing input costs by cutting out 40# of nitrogen from their normal program resulting in an average savings of \$0.35/unit of nitrogen on the 40# reduced- Averages corrected by excluding outliers.

*\$7.25 Corn

Average Cost Savings	Yield +	ROI*
\$14/Acre	-0.11	\$13.20



- 4. Pivot Bio cont.
 - a. Replacing 15-30# of synthetic nitrogen
 - i. 13% of Nextgen Customer Acres

	P40	UTC	P40	UTC	P40	UTC	Average Yield Response
Farm A	264.61	258.19	286.95	284.31	249.19	259.46	-0.40
Farm A	260.13	260.7	260.64	253.56	274.02	275.06	1.82
Farm B	275.23	263.83	265.45	262.25	257.33	264.32	2.54
Farm B	241.27	235.24	239.22	232.39	228.05	231.81	3.03
Farm C	231.71	223.88	242.15	240.81			4.59
Farm C	218.87	226.4	222.79	214.13			0.56
Farm C	255.21	232.83	247.47	260	286.18	276.45	6.53
Farm C	275.23	263.83	265.45	262.25	257.33	264.32	2.54

Summary of 8 fields on three farms adding Proven 40 in-furrow and reducing input costs by cutting out 15-30# of nitrogen from their normal program resulting in an average savings of \$0.35/unit of nitrogen on the 15-30# reduced- Averages corrected by excluding outliers.
 *\$7.25 Corn

Average Cost Savings	Yield +	ROI*
\$6.48/Acre	2.65	\$25.69





Research Summary – In-Furrow Corn

1. Inceptive Nematicide – Brandt Consolidated

- a. 80-20 talc graphite containing harpin proteins to help reduce stressed caused from nematode root feeding in corn.

Field:	Inceptive	UTC	Inceptive	UTC	Inceptive	UTC	Average Yield Response
JT13	264.17	263.34	288.99	285.1	262	260.73	2.00
JT9	263.56	265.19	276.17	276.89	263.92	254.21	2.45

Summary of 2 fields on one farm adding Inceptive as the source of talc on planter boxes.

*\$7.25 Corn

Average Cost Savings	Yield +	ROI*
\$4.45/Acre	2.23	\$11.72

2. Biological Comparisons – Multiple Companies

- a. In-Depth comparisons consisting of 3 replications across two fields in Yuma County, CO.

Product:	Pass 1	Pass 2	Pass 3	Pass 4	Pass 5	Pass 6	Average Yield
Pivot Bio	242.69	247.22	250.84	234.01	250.87	256.61	247.04
Alpha Complete	237.87	246.76	250.11	243.21	241.16	245.67	244.13
Ntexas Edge	245.78	238.45	248.7	241.6	238.7	248.6	243.64
Sp-1	236.25	243.54	237.9	243.38	239.7		240.15
Rev. Hopper Throttle	262.25	259.31	240.56	242.03	238.46	212.55	242.53
UTC							242.46

Summary of 2 fields on one farm adding multiple biological/microbial products to their in-furrow blend

*\$7.25 Corn

Cont. on next Page

Product	Average Cost	Yield +	ROI*
Pivot Bio	\$22/Acre	4.58	\$11.21
Alpha Complete	\$18/Acre	1.67	-\$5.89
Ntexx Edge	\$20/Acre	1.18	-\$9.45
Sp-1	\$10.50/Acre	-2.31	-\$27.25
Revline Hopper Throttle	\$9.50/Acre	0.07	-\$8.99
UTC	\$0	0	\$0

3. SP-1 Classic – DPH Biologicals

- a. A liquid biofertilizer comprised of a diverse community of microbes, plant-based humus extracts and algae, that work together to improve soil structure, make more nutrients available and ultimately increase yield.

Field:	SP-1	UTC	SP-1	UTC	SP-1	UTC	Average Yield Response
White	233.81	243.78	239.73	243.79	234.59	240.31	
White	242.38	257.85	242.31	240.21	239.71	243.9	-6.22
#02	243.05	241.66	239.9	241.17	240.21	242.1	
#02	234.91	224.47	237.23	238.16	241.01	242.25	1.08
OB	218.57	217.56	222.87	217.9	219.43	206.26	6.38
SDF 12	220.06	214.02	219.75	216.77	220.02	220.03	3.00
SDF 13	221.45	218.43	219.39	224.36	226.79	221.79	1.02
SDF 14	218.65	217.48	223.51	224.37	215.27	212.95	1.63
Peg South	214.46	216.3	221.26	219.3	226.7	225.6	0.41

Summary of 7 fields on five farms adding 2 gal/ac of SP-1 to their in-furrow blend.

*\$7.25 Corn

Average Cost	Yield +	ROI*
\$10.50/Acre	1.04	-\$2.96

4. ProGerminator – AgroLiquid

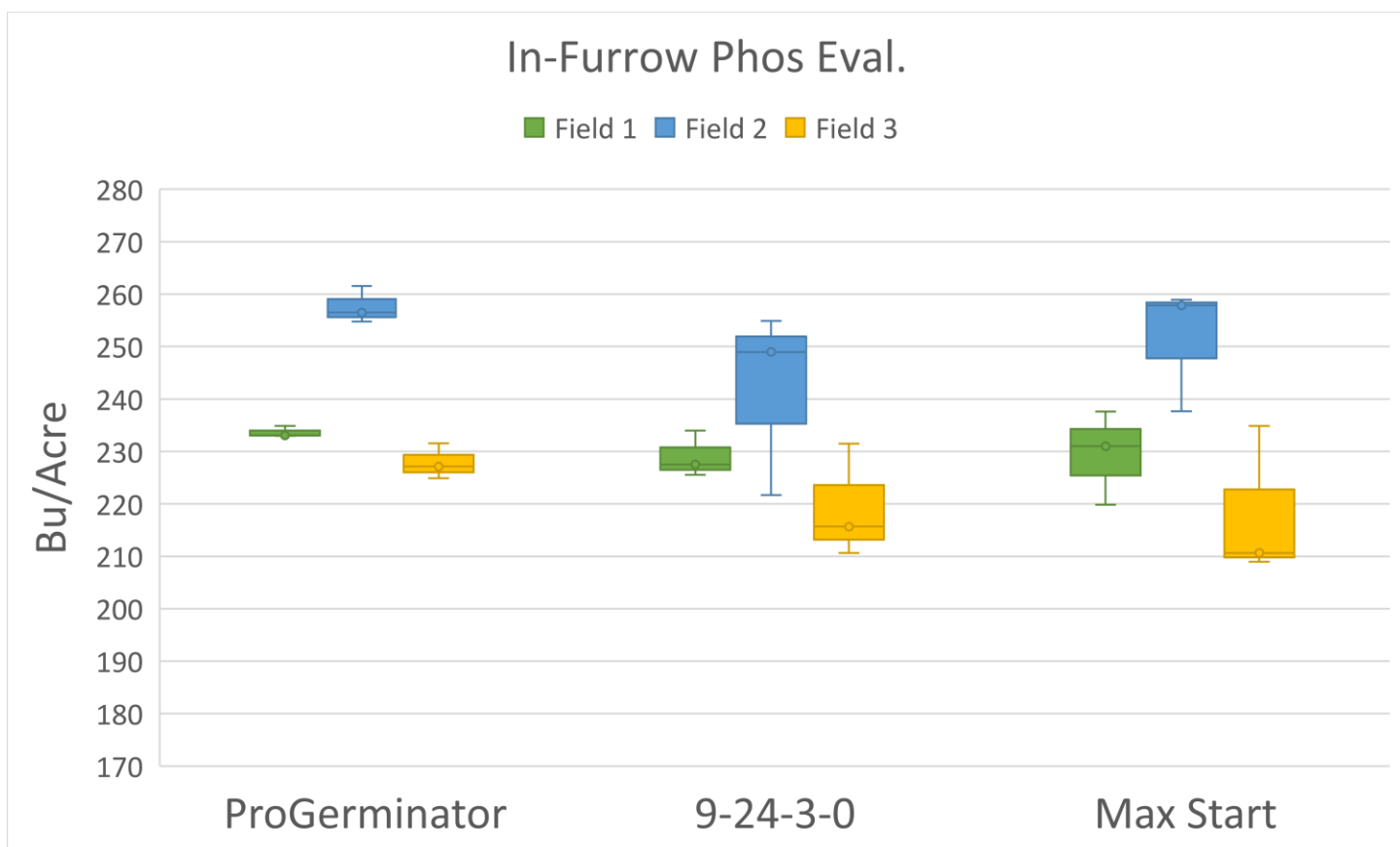
- a. Premium phosphorus fertilizer made with plant-derived molecules that protect against nutrient tie-up and result in high efficiency of phosphorus. This technology is called Flavonol Polymer and is the key component in allowing AgroLiquid to make products highly effective at lower rates. Pro-Germ also contains potassium and iron to help stimulate early season plant growth and vigor.

Field:	ProGerm	10-34-0	ProGerm	10-34-0	ProGerm	10-34-0	Average Yield Response
13	264.17	263.34	288.99	285.1	262	260.73	2.00
WW	249.16	239.78	248.85	247.98	251.48	244.12	5.87
Trap1	299.29	285.15	293.74	283.95	303.83	303.8	7.99

Summary of 3 fields on three different farms replacing 3 gal of 10-34-0 with 2 gal of Progerminator in-furrow
 *\$7.25 Corn

Average Cost Difference	Yield +	ROI*
\$14.05/Acre	5.29	\$24.30

Progerminator proved to be more reliable and consistent throughout plots on three separate fields and averaged 3bu+ than Max Start (competitors 9-24-3) which does not have flavonol polymer technology.



5. Micro 500 – AgroLiquid

- a. Throughout the last four years, one of the favorite micro-nutrient starter blends has been Micro 500. It contains a good shot of Zinc and Manganese, which we struggle with in the great plains. It also contains three other micronutrients taking advantage of the synergistic affect caused by nutrient ratios in the soil being in balance and remaining it has proven itself every year so the last two years we wanted to see what would happen if we ran a higher rate. Last year we averaged near 12 bushels increased across several fields. We replicated these trials this year and received a similar result. Most the time, extra in-furrow or 2x2 micro-nutrients will pay in a big way.

Field:	M500- 3qts/ac	M500- 1qt/ac	M500- 3qts/ac	M500- 1qt/ac	M500- 3qts/ac	M500- 1qt/ac	Average Yield Response
6	214.48	216.95	219.37	205.73	220.7	217.45	4.81
28	250.91	244.69	292.43	266.87	269.67	272.3	9.72
OB	225.86	223.08	214.21	217.08	235.8	229.02	2.23

Summary of 3 fields on two different farms running an additional 2 qts. of Micro 500/acre
*\$7.25 Corn

Average Cost	Yield +	ROI*
\$12.50/Acre	5.58	\$27.96

6. In-furrow vs. no In-furrow

- a. Debating whether In-Furrow is worth it? We ran 2 gal of Pro-Germ, 2 qts. of Micro 500, and 4 oz. of Headline Sc in-furrow and compared to no in-furrow with the same planter. Deciding what kind of benefit, you can have by placing fertilizer and fungicide closer to the seed can be difficult. This was a staple blend for us this year across 5 different states.

Field:	In-Furrow	UTC	In-Furrow	UTC	In-Furrow	UTC	Average Yield Response
8	257.93	251.61	288.89	256.94	263.15	258.2	14.41
2	199.03	197.33	215.91	199.99	210.98	197.62	10.33
S. East	194.64	194.6	241.51	207.48	220.33	203.86	16.85
7	249.16	239.78	248.85	247.98	251.48	244.12	5.87

Summary of 4 fields on four different farms comparing in-furrow placement of products where the untreated has the same products placed on top of the ground behind closing system.

*\$7.25 Corn

Average Cost Difference	Yield +	ROI*
\$33.45/Acre	11.86	\$52.54

7. EnzUp Mn – Brandt Consolidated

- a. In-Furrow placed manganese with Brant's enzyme technology to help increase plant uptake and availability.

Field:	EnzUp Mn	UTC	EnzUp Mn	UTC	EnzUp Mn	UTC	Average Yield Response
7	242.29	243.49	260.34	258.32	251.6	250.91	0.50

Summary of 1 comparing EnzUp Mn at 1qt./acre to no Manganese applied.

*\$7.25 Corn

Average Cost Difference	Yield +	ROI*
\$6.45/Acre	0.5	-\$2.83

8. Ntexas Edge – Prime-Dirt

- a. In-Furrow placed manganese with Brant's enzyme technology to help increase plant uptake and availability.

Field:	Ntexas Edge	UTC	Ntexas Edge	UTC	Ntexas Edge	UTC	Average Yield Response
7	246.17	251.73	275.17	258.41	247.49	251.22	2.49

Summary of 1 comparing Ntexas Edge at 2 qts./acre in-furrow to an untreated check without any Biologicals applied

*\$7.25 Corn

Average Cost Difference	Yield +	ROI*
\$17.56/Acre	2.49	\$0.49