



# 2023

## Trial Results

“Nextgen is founded on research to boost your profits and increase yields. We continue to provide quality comparisons on a multitude of products throughout several states. As we continue to increase the amount of collected data to better the farmer, I must give a huge THANK YOU to all the farmer cooperators who have taken the time and effort to help apply and evaluate these products. I would also like to thank the many companies and agronomists who have provided support and products. Nextgen looks forward to continuing and increasing product research in the future.” -Paul Beyer

## Research Summary - Starter Fertilizer

### 1. ProGerminator – AgroLiquid

- a. Premium phosphorus fertilizer enhanced with plant-based carbon that protects against nutrient tie-up and results in a high efficiency of phosphorus. This technology is called Nutriq 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.

Details -Ultra Low-salt, ortho. and poly. form, plant available, timely release

Objective: Evaluating in-furrow phosphorus products for Yuma County Colorado and surrounding areas on irrigated corn.

### Trial 1

This trial was evaluating:

1. 2gal/ac Pro-Germinator, 2 qt./ac Micro 500 (in-furrow)
2. Grower standard of 3gal/ac MaxStart, 1 qt./acre EDTA Zinc (in-furrow)

Starter was out the back and remained the same for all treatments (40#N-10#P-5#S)/Ac

Eckley, CO		
	PG+500	MS+Zn
Side by Side 1	259.78	253.91
Side by Side 2	272.30	255.52
Side by Side 3	264.30	264.38
<b>Average</b>	<b>265.46</b>	<b>257.94</b>

Summary of 3 side by side evaluations on one field.

\*\$5.14Corn

Cost/Acre	Yield +	ROI*
<b>\$12.09/Acre more</b>	<b>7.52</b>	<b>\$26.56</b>

## Trial 2

This trial was evaluating:

1. 2gal/ac Pro-Germinator (in-furrow)
2. Grower standard of 3gal/ac MaxStart (in-furrow)

Starter was out the back and remained the same for all treatments (35#N-20#P-0#K)/Ac

Vernon, CO		
	PG	MS
Side by Side 1	211.3	191.69
Side by Side 2	211.92	212.9
Side by Side 3	210.59	213.59
Side by Side 4	216.26	214.83
Side by Side 5	221.4	215.87
Side by Side 6	211.36	202.66
Side by Side 7	221.27	220.36
Side by Side 8	225.53	219.65
<b>Average</b>	<b>216.20</b>	<b>211.44</b>

Summary of 8 side by side evaluations on one field.

\*\$5.14Corn

Cost/Acre	Yield +	ROI*
<b>\$7.87/Acre more</b>	<b>4.76</b>	<b>\$16.60</b>

It was also noted that there was less variability in the treated vs the grower standard from strip to strip. See -Figure 1.

Early season vigor is very important in corn and in cooler springs we have repeated the study of available phosphorus from Pro-Germinator and have always been impressed early in the season. See Figure 2.

Phosphorus in the soil does not convert to the plant available form until soil temperatures have reached 60 degrees Fahrenheit and ortho-phosphate quickly becomes poly-phosphate in conventional ortho products without the Nutriq encapsulation that Pro-Germinator contains

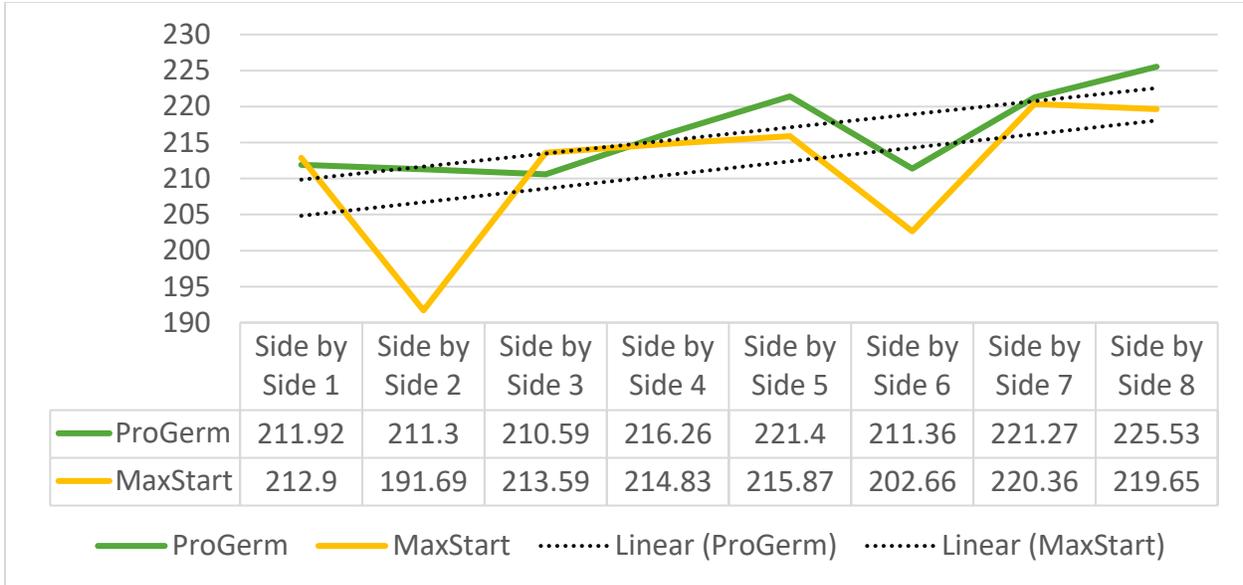


Figure 1.



Figure 2.

Pro-Germ is on the left-hand side of the picture while the grower standard is on the right.

## Trial 3

Objective: Determine if there is still a benefit of applying Pro-Germinator in-furrow in a high phosphorus environment.

This trial was evaluating:

1. 1.5gal/ac Pro-Germinator, 1 gal/acre Sure-K, 2 qt./ac Micro 500 (in-furrow)
2. Untreated check 1.5gal/ac water, 1gal/acre Sure-K, 2 qt./ac Micro 500 (in-furrow)

Starter was out the back and remained the same for all treatments (50#N-0#P-15#S)/Ac  
Variable of 1.5gal/acre of Pro-Germ vs. no Pro-Germ

Field A

- Heavily Manured
- P1: 120-146ppm

Field B

- Heavily Manured
- P1: 165-190ppm
- 2" soil depth at time of planting was 55-57degrees. (this is warm but a lot of tied up phosphorus from manure)

	Field A	Eckley, CO
	<b>ProGerm</b>	<b>Untreated</b>
Side by Side 1	262.86	260.4
Side by Side 2	258.95	255.94
Side by Side 3	257.61	257.36
<b>Average</b>	<b>259.78</b>	<b>257.9</b>
	Field B	Yuma, CO
	<b>ProGerm</b>	<b>Untreated</b>
Side by Side 1	287.44	286.28
Side by Side 2	280.16	282.75
Side by Side 3	288.72	275.30
<b>Average</b>	<b>285.49</b>	<b>281.44</b>

Summary of 3 side by side evaluations on two fields.

\*\$5.14Corn

Cost/Acre	Yield +	ROI*
<b>\$11.41/Acre more</b>	<b>2.9</b>	<b>\$3.50</b>

## 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.

## Trial 4

Objective: Is there a benefit of adding SP-1 as a humic replacement or in addition to a standard in-furrow program.

This trial was evaluating:

1. 2gal/ac Pro-Germinator, 1 gal/acre SP-1, 2 qt./ac Micro 500 (in-furrow)
2. Untreated check 2gal/ac Pro-Germinator, 1gal/acre water, 2 qt./ac Micro 500 (in-furrow)

Haigler, NE		
	SP-1	Untreated
Side by Side 1	258.94	261.54
Side by Side 2	261.04	259.47
Side by Side 3	265.8	248.69
<b>Average</b>	<b>261.93</b>	<b>256.57</b>

Summary of 3 side by side evaluations on one field.

**\*\$5.14Corn**

Cost/Acre	Yield +	ROI*
<b>\$6.00/Acre more</b>	<b>5.36</b>	<b>\$21.55</b>

### 3. Biological/Micronutrient Comparisons – Multiple Companies

In-Depth comparisons consisting of 2-3 replications across two fields in Yuma County, CO.

#### Trial 5

Objective: Discover which biologicals or micronutrients best fit our area when adding them to a standard in-furrow package.

This trial was evaluating:

1. GS - 1.5gal/ac Pro-Germinator, 1 gal/acre Sure-K, 2 qt./ac Micro 500 (in-furrow) as the consistent treatment across all tests.
2. Boma 16 oz./acre (Fulvic acid with Zinc, also known as Nutex EDA) + GS
3. Seedzone IF ,1qt./acre (a new formulation of Zinc paired with water penetration aid adjuvants)+GS
4. Revline Advanced 3 oz./acre (Giberillic Acid) +GC
5. SP-1, 1 gal/acre(algae, humus, and several bacteria) +GS
6. Holganix 2 gal/acre (A long list of Bio organisms) +GS
7. Zinc++ 1 pt./acre(new formulation of Zinc to aid uptake) +GS
8. Holganix at 2gal/acre +GS in-furrow

\*\$5.14Corn

	Yuma, CO	Wray, CO
	<b>SeedZone IF</b>	<b>Untreated</b>
Fld. Avg. - Wray	<b>262.41</b>	<b>257.41</b>

<b>SeedZone IF Cost/Acre</b>	Yield +	ROI*
<b>\$6.94/Acre more</b>	<b>5.0</b>	<b>\$18.76</b>

	Yuma, CO	Wray, CO
	<b>Boma</b>	<b>Untreated</b>
Fld. Avg. - Wray	<b>261.21</b>	<b>261.22</b>
Fld. Avg. - Yuma	<b>249.21</b>	<b>248.42</b>

<b>Boma</b> Cost/Acre	Yield +	ROI*
<b>\$4.68/Acre more</b>	<b>0.7</b>	<b>-\$1.08</b>
Yuma, CO , Wray, CO		
	<b>Revline Advanced</b>	<b>Untreated</b>
Fld. Avg. - Wray	<b>258.76</b>	<b>264.18</b>

<b>Revline Advanced</b> Cost/Acre	Yield +	ROI*
<b>\$6.45/Acre more</b>	<b>-5.42</b>	<b>-\$34.31</b>

Yuma, CO , Wray, CO		
	<b>SP-1</b>	<b>Untreated</b>
Fld. Avg. - Wray	<b>254.16</b>	<b>248.69</b>

<b>SP-1</b> Cost/Acre	Yield +	ROI*
<b>\$6.00/Acre more</b>	<b>+5.47</b>	<b>\$22.12</b>

Yuma, CO , Wray, CO		
	<b>Holganix</b>	<b>Untreated</b>
Fld. Avg. - Wray	<b>245.54</b>	<b>244.27</b>

<b>Holganix</b> Cost/Acre	Yield +	ROI*
<b>\$14.90/Acre more</b>	<b>+1.27</b>	<b>-\$8.37</b>

Yuma, CO , Wray, CO		
	<b>Zinc ++</b>	<b>Untreated</b>
Fld. Avg. – Wray	<b>258.54</b>	<b>256.1</b>
Fld. Avg. – Yuma	<b>242.19</b>	<b>244.9</b>

<b>Zinc ++</b> Cost/Acre	Yield +	ROI*
<b>\$5.50/Acre more</b>	<b>-0.14</b>	<b>-\$6.22</b>

Venango, NE		
	<b>Holganix</b>	<b>Untreated</b>
Side by Side 1	186.83	185.3
Side by Side 2	181.71	194.14
Side by Side 3	181.35	188.37
Side by Side 4	184.25	176.99
Side by Side 5	192.55	
Side by Side 6	188.33	
<b>Average</b>	<b>185.8</b>	<b>186.2</b>

Summary of 4 side by side evaluations on one field.

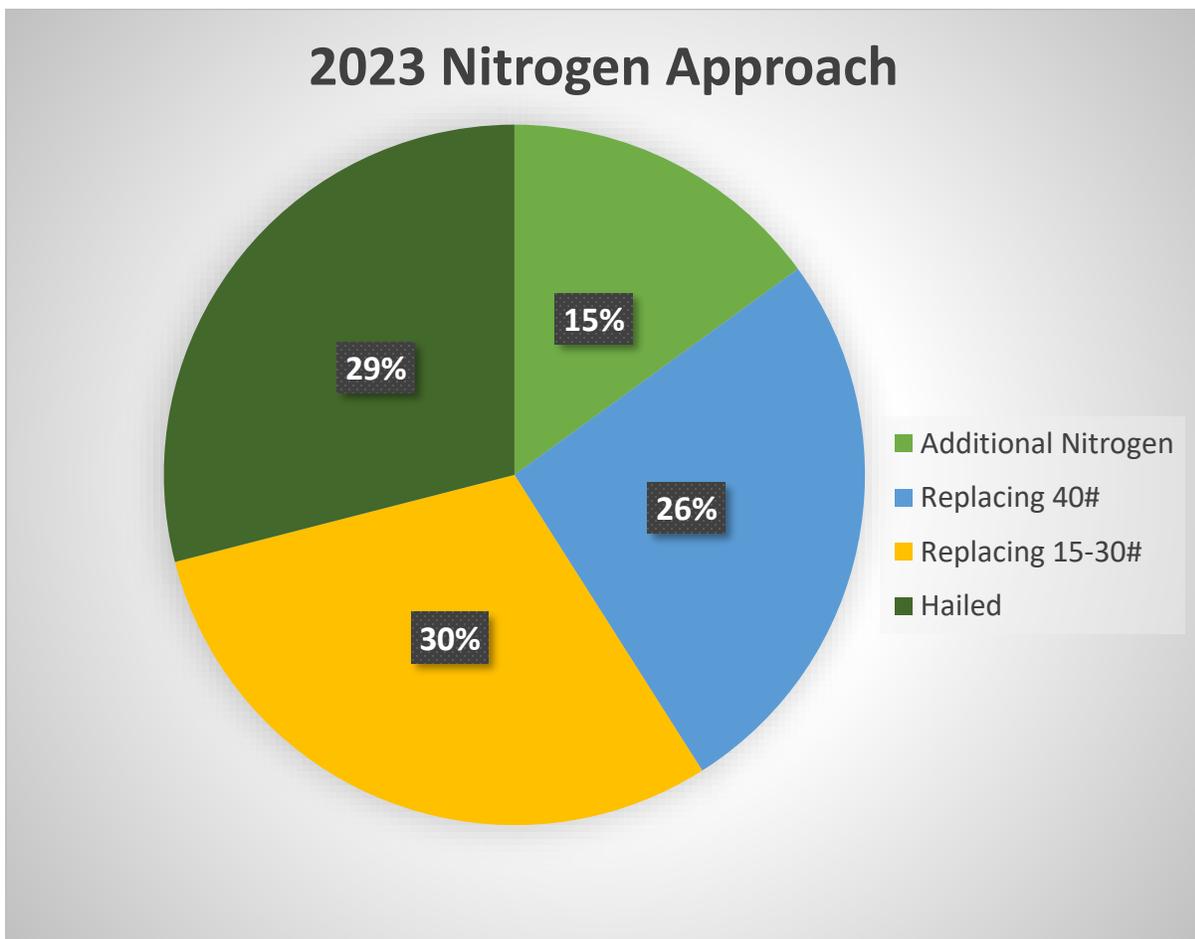
\*\$5.14Corn

Cost/Acre	Yield +	ROI*
<b>\$13.00/Acre more</b>	<b>-0.4</b>	<b>-\$15.06</b>

## Research Summary – Nitrogen Replacement

### 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.



### Additional Nitrogen (on top of normal nitrogen program)

- 15% of Nextgen Customer Acres

Objective: What is the best placement for Proven 40 in the nitrogen management plan.

This trial was evaluating:

- Additional 40# of Nitrogen from Proven 40

Location	P40	UTC	P40	UTC	P40	UTC	Average Yield Response
Eckley, CO	271.28	258.37	270.0	267.0	260.49	256.17	6.75
Eckley, CO	261.11	257.72	253.82	255.44	263.53	263.0	0.77
Eckley, CO	260.39	249.62	248.79	248.92	249.16	248.12	3.89
Eckley, CO	221.18	204.65	207.05	199.57	204.02	204.63	7.8
Holyoke, CO	245.26	250.0	254.19	244.9	260.87	254.12	3.77
Yuma, CO	267.15	264.8	261.54	268.45	259.6	256.49	-0.5
Yuma, CO	292.46	287.1	301.78	290.36	299.17	260.38	18.5

\*\*Excluded Outlier

\*\$5.14 Corn

Avg. Cost/Acre	Yield +	ROI*
<b>\$18.50/Acre more</b>	<b>+4.7**</b>	<b>\$5.50</b>

## Replacing 40# Synthetic Nitrogen

- 26% of Nextgen Customer Acres

### 2. Pivot Bio cont.

#### a. Replacing 40# of synthetic nitrogen

- 26% of Nextgen Customer Acres (would have been much higher without hail)

Location	P40	UTC	P40	UTC	P40	UTC	Average Yield Response
Grant, NE	219.36	208.51	215.03	215.33	210.18	209.44	3.76
Grant, NE	222.84	219.04	224.13	220.07	234.7	230.1	4.15
Vernon, CO	214.24	195.4	203.25	210.75	213.05	202.21	7.4
Vernon, CO	199.98	198.36	202.57	205.53	207.05	207.38	-0.5
Yuma, CO	221.6	220.71	218.64	210.75	215.64	210.83	4.53
Wray, CO	272.2	271.51	270.04	268.5	274.79	273.4	1.22
Veron, CO	226.48	224.12	230.01	235.48	230.45	229.65	-0.8
Yuma, CO	274.13	271.16	270.64	274.64	261.89	265.7	-1.8
Brandon, NE	236.15	238.44	238.46	236.81	228.31	227.04	0.3
Haigler, NE	231.7	228.46	240.42	238.91	233.38	229.22	3.0
Idalia, CO	245.68	240.1	238.97	237.49	241.14	242.6	1.9
Eckley, CO	278.64	277.44	296.35	287.35	288.68	284.35	4.7
Eckley, CO	308.42	306.51	296.68	302.55	299.41	292.47	1.1

\*\*Excluded Outlier

\*\$5.14 Corn – Savings of \$0.25/lb of N replaced

Avg. Cost/Acre	Yield +	ROI*
<b>\$10.00/Acre less</b>	<b>+2.2**</b>	<b>\$20.28</b>

### Replacing 15-30# Synthetic Nitrogen

- 30% of Nextgen Customer Acres

#### 3. Pivot Bio cont.

- a. Replacing 40# of synthetic nitrogen
  - i. 26% of Nextgen Customer Acres (would have been much higher without hail)

Location	P40	UTC	P40	UTC	P40	UTC	Average Yield Response
Haigler, NE	222.8	219	224.1	220.1	234.7	224.5	4.3
Grant, NE	219.4	208.5	215.0	215.3	210.2	209.4	2.3
Wray, CO	246.5	245.7	255.2	241.4	251.6	249.6	4.8
Wray, CO	309.06	284.91	299.25	288.06	307.84	280.18	21.0
Otis, CO	241.97	242.67	250.16	249.38	244.77	241.15	1.2
Goodland, KS	204.36	208.96	201.69	194.61	206.87	201.11	2.9

\*\*Excluded Outlier

\*\$5.14 Corn – Savings of \$0.25/lb of N replaced

Avg. Cost/Acre	Yield +	ROI*
<b>\$5.25/Acre less</b>	<b>+3.1**</b>	<b>\$21.18</b>

## Pivot Bio – Nitrogen Rate Titration

Designed to verify efficacy of the microbes and confirm that they are alive and working when applied In-furrow. – Hooker, OK

1. Grower Standard is 240# of N with no Pivot Bio.
2. NTC is where only the specified synthetic nitrogen was applied and no Pivot Bio Proven 40

<b>Entry</b>		<b>Harvest</b>	<b>Bu/Ac</b>	<b>Yield</b>	<b>Income</b>
<b>No.</b>	<b>Treatment</b>	<b>Weight</b>		<b>Rank</b>	<b>Rank</b>
1	0N NTC	8600	196.1	10	10
2	100N NTC	10650	239.4	6	6
3	150N NTC	10560	237.6	7	7
4	200N NTC	11150	248.5	5	5
5	Grower Std.	11300	249.2	4	4
6	Grower Std.	11550	253.9	2	2
7	0+P40	9900	218.2	9	9
8	100N + P40	10150	222.1	8	8
9	150N + P40	11650	253.9	1	1
10	200N + P40	11750	253.4	3	3

This is probably the most valuable page in this booklet, verifying that microbes are working.

Since Proven 40 microbes attach to the roots of the plant, they are not leachable. With the excess rainfall in our area this spring we saw a stark difference in lower CEC soils that had Pivot Bio where losing nitrogen was not as yield limiting. See Figure 3. Below. The penalty for not having nitrogen for the crop can be seen due to leaching. And Figure 4. Shows a dryland comparison outside of Burlington, CO.

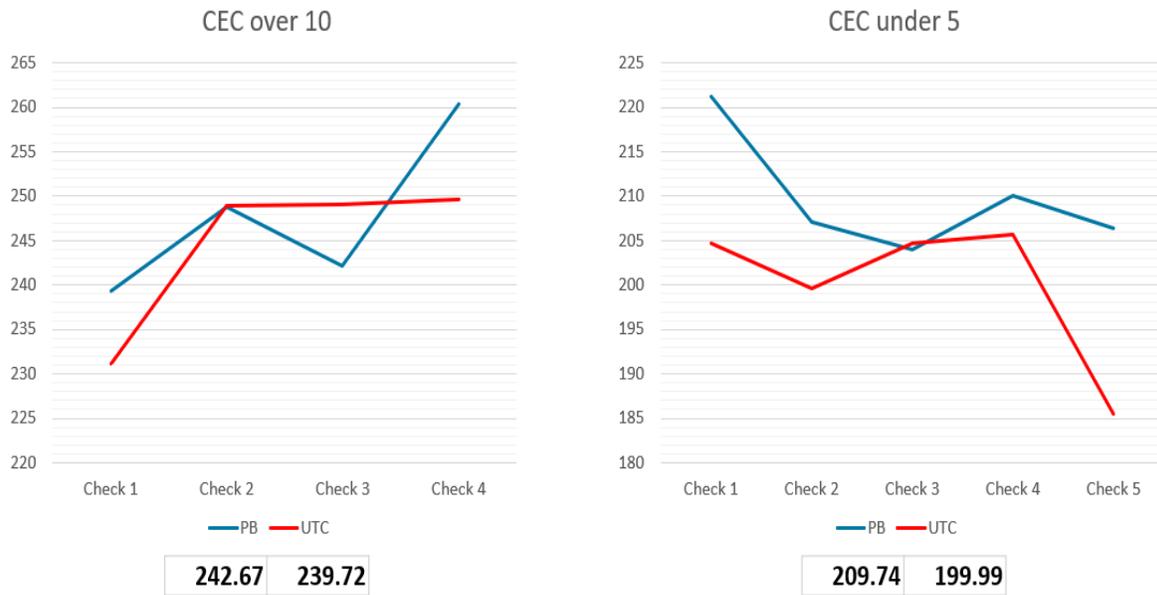


Figure 3.



Figure 4.

## Research Summary – New Phosphorus

### 1. EnzUp P DS – Brandt

This groundbreaking new enzyme technology creates a rich soil environment around the seed, which supports early growth and root development. BRANDT EnzUp gets plants out of the ground faster, which extends the growing period and yield opportunity.

Details -Low-salt, ortho. form, plant available, enzymes

Objective: Determining if EnzUp P DS can provide same benefit as ProGerm

### Trial 6

This trial was evaluating:

- 1.5gal/ac Pro-Germinator, 1gal/ac Sure-K, 2 qt./ac Micro 500 (in-furrow)
- 4 gal EnzUp P DS @1#/gal solubilized, 1gal/ac Sure-K, 2 qt./ac Micro 500 (in-furrow)

Starter was out the back and remained the same for all treatments (40#N-10#P-5#S)/Ac

Yuma, CO		
	EnzUp P DS	PG (GS)
Side by Side 1	246.61	261.76
Side by Side 2	249.42	251.81
Side by Side 3	253.17	252.75
<b>Average</b>	<b>249.73</b>	<b>255.44</b>

Summary of 3 side by side evaluations on one field.

\*\$5.14Corn

Cost/Acre	Yield +	ROI*
<b>\$7.43/Acre less</b>	<b>-5.71</b>	<b>-\$21.92</b>

We wanted to share a few pictures of in-furrow trials and products that have us thinking we have something figured out. ProGerminator, Micro 500, Amplify D, Sure-K and Pivot Bio. Figure 5 and 6.



V5 Corn South of Eckley, CO  
Figure. 5.



Figure 6.

V3 Corn South of Yuma, CO

## Research Summary – Corn Foliar Products

### 1. Source – Sound Agriculture

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.

Details: a chemical soil activator to energize the microbiome.

Objective: Determining if Source can provide a replacement of synthetic fertilizer s as well as evaluating plant health benefits.

### Trial 7

This trial was evaluating:

1. Source applied at V4-5 on Corn with herbicide as grower standard.
2. Grower standard with no Source added.

Yuma, CO		
	Source	(GS)
Side by Side 1	241.6	240.6
Side by Side 2	251.2	245.32
Side by Side 3	246.32	239
<b>Average</b>	<b>244.83</b>	<b>241.12</b>

Summary of 3 side by side evaluations on one field.

\*\$5.14Corn

Cost/Acre	Yield +	ROI*
<b>\$12.00/Acre more</b>	<b>+3.6</b>	<b>\$6.50</b>

Eckley, CO		
	Source	(GS)
Side by Side 1	265.4	255.6
Side by Side 2	268.3	254.8
Side by Side 3	264.9	260.5
<b>Average</b>	<b>266.2</b>	<b>256.9</b>

Summary of 3 side by side evaluations on one field.

\*\$5.14Corn

Cost/Acre	Yield +	ROI*
<b>\$12.00/Acre more</b>	<b>+9.3</b>	<b>\$35.80</b>

Brandon, NE		
	Source	(GS)
Side by Side 1	221.85	223.35
Side by Side 2	230.3	228.51
Side by Side 3	231.39	228.59
Side by Side 4	220.86	229.72
Side by Side 5	215.6	212.12
Side by Side 6	214.33	215.31
<b>Average</b>	<b>222.4</b>	<b>222.9</b>

Summary of 6 side by side evaluations on one field.

\*\$5.14Corn

Cost/Acre	Yield +	ROI*
<b>\$12.00/Acre more</b>	<b>-0.5</b>	<b>-\$14.57</b>

Brandon, NE		
	Source	(GS)
Side by Side 1	188.68	185.3
Side by Side 2	185.68	194.14
Side by Side 3	189.92	188.37
Side by Side 4	187.32	176.99
Side by Side 5	196.44	
Side by Side 6	188.39	
<b>Average</b>	<b>189.1</b>	<b>186.2</b>

Summary of 4 side by side evaluations on one field.

\*\$5.14Corn

Cost/Acre	Yield +	ROI*
<b>\$12.00/Acre more</b>	<b>+2.9</b>	<b>\$2.91</b>

## Trial 8

This trial was evaluating:

1. Source applied at V4-5 on Corn with herbicide as grower standard, then 25# of N were reduced through the pivot.
2. Grower standard with no Source added. Herbicide as normal, then full nitrogen applied.

Yuma, CO		
	Source	(GS)
Side by Side 1	200	198.4
Side by Side 2	202.6	205.5
Side by Side 3	207.1	207.4
<b>Average</b>	<b>203.2</b>	<b>203.8</b>

Summary of 3 side by side evaluations on one field.

\*\$5.14Corn and \$0.35/lb N reduction savings

Cost/Acre	Yield +	ROI*
<b>\$8.75/Acre less</b>	<b>-0.6</b>	<b>\$5.67</b>

**Half Field Comparisons on Source**

1. Aerial or Ground Sprayer applied.

	Yuma, CO	Irr. Corn
-Applied at V4-6		
	<b>Source</b>	<b>UTC</b>
Field 1	254.1	251.2
Field 2	224.8	225.6
Field 3	233.6	229.2
Field 4	261.4	248.7
<b>Average</b>	<b>243.5</b>	<b>238.7</b>

Summary of 3 field averages when 25-30# of Nitrogen was Reduced.

\*\$5.14Corn and \$0.35/lb N reduction savings

Cost/Acre	Yield +	ROI*
<b>\$9.10/Acre less</b>	<b>+4.8</b>	<b>\$33.77</b>

	Eckley, CO	Irr. Corn
-Applied at V4-6		
	<b>Source</b>	<b>UTC</b>
Field 1	284.6	267.2
Field 2	224.3	216.8
Field 3	209.6	203.9
<b>Average</b>	<b>239.5</b>	<b>229.3</b>

Summary of 3 field averages when no nitrogen was reduced.

\*\$5.14Corn

Cost/Acre	Yield +	ROI*
<b>\$12.00/Acre more</b>	<b>+10.2</b>	<b>\$40.43</b>

## Research Summary – Soybean Foliar Products

### 2. Source – Sound Agriculture

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.

Details: a chemical soil activator to energize the microbiome.

Objective: Determining if Source can provide a replacement of synthetic fertilizers as well as evaluating plant health benefits.

### Trial 9

This trial was evaluating:

3. Source applied at V3 Soybeans with herbicide as grower standard.
4. Grower standard with no Source added.

Hooker, OK		
	Source	(GS)
Side by Side 1	92.1	85.31
Side by Side 2	94.68	82.34
Side by Side 3	98.74	89.27
Side by Side 4	95.65	90.5
<b>Average</b>	<b>95.3</b>	<b>86.9</b>

Summary of =4 side by side evaluations on one field.

\*\$11.90 Soybeans

Cost/Acre	Yield +	ROI*
<b>\$10/Acre more</b>	<b>+8.4</b>	<b>\$89.96</b>

## Research Summary – Wheat Foliar Products

### 3. Source – Sound Agriculture

Formulated to reactivate the soil microbiome and provide access to more nitrogen and phosphorus. It's like caffeine for microbes and helps 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.

Details: a chemical soil activator to energize the microbiome.

Objective: Determining if Source can provide a replacement of synthetic fertilizers as well as evaluating plant health benefits on irrigated wheat.

### Trial 10

This trial was evaluating:

1. Source applied at flag leaf on Wheat.
2. Grower standard with no Source added.

Brandon, NE		
	Source	(GS)
Side by Side 1	108.45	104.53
Side by Side 2	119.05	112.86
Side by Side 3	113.43	116.38
Side by Side 4	113.07	114.21
Side by Side 5	110.75	110.74
<b>Average</b>	<b>112.95</b>	<b>111.7</b>

Summary of 5 side by side evaluations on one field.

\*\$5.77/Wheat

Cost/Acre	Yield +	ROI*
<b>\$10.00/Acre more</b>	<b>+1.2</b>	<b>-3.076</b>

## Research Summary – Strip Til -Micronutrients Corn

### Copper – AgroLiquid

MicroLink™ copper sulfate fertilizer gives plants a usable supply of copper at any growth stage. Without copper, vital enzymes needed for photosynthesis will deteriorate. This will stunt the plant's growth, cause leaves to die, and reduce yields. Symptoms of copper deficiency will appear in leaves; they will turn light green before they curl and die.

Our copper sulfate fertilizer can be safely combined with other micro- or macronutrients to reduce manpower and time. It can also be applied in a variety of ways. Speak with an agronomist to learn about the most efficient method for your crops.

Objective: Determining if low soil levels of copper can be corrected in an economical way to provide yield boost and roi.

### Trial 11

This trial was evaluating:

1. 3 qts./acre of Cu sulfate from AgroLiquid added to spring strip-til grower standard blend
2. Grower standard of NPK blend which is consistent in both treatment areas

Yuma, CO		
	Copper	(GS)
Side by Side 1	202.67	193.98
Side by Side 2	216.10	202.94
Side by Side 3	218.78	210.38
Side by Side 4	227.70	224.30
Side by Side 5	216.11	204.61
Side by Side 6	221.97	221.09
<b>Average</b>	<b>217.22</b>	<b>209.55</b>

Summary of 6 side by side evaluations on one field.

**\*\$5.14Corn**

Soil levels below 1.6ppm at 6"

Cost/Acre	Yield +	ROI*
<b>\$14.80/Acre more</b>	<b>+7.67</b>	<b>\$24.62</b>

## Research Summary – Fertigation - Corn

### Compost Extract (Tea)

A blend of microorganisms and natural biology that some will reintroduce into their soil in hopes to improve nutrient cycling in the field.

We found that there is a lot of challenges in applying and keeping the microbes alive and that logistically there needs to be improvements in shelf life in order for this to become a standard practice.

### Trial 12

This trial was evaluating:

1. 5gal/acre of compost tea from a local feedlot fertigated on ½ of the pivot
2. Grower standard was treated with SP-1 at 5 gal/acre

Yuma, CO		
	SP-1	Compost (Tea)
Side by Side 1	234.53	221.10
Side by Side 2	241.62	240.63
Side by Side 3	221.46	219.44
Side by Side 4	226.31	224.60
Side by Side 5	243.15	240.16
<b>Average</b>	<b>233.41</b>	<b>229.19</b>

Summary of 5 side by side evaluations on one field.

\*\$5.14Corn

Cost/Acre	Yield +	ROI*
<b>\$0/Acre</b>	<b>-4.22</b>	<b>-\$21.69</b>