

holganix

Product Performance

Third Party Data

www.holganix.com

866-563-2784



Bio 800+

Soil Health. Yield. Sustainability.

Holganix Bio 800+ harnesses the power of over 800 species of soil microbes to increase the farm's profit per acre by building soil health, reducing fertilizer requirements, improving yield, and breaking down crop debris.

By charging soils with diverse microbes, we help our farmers improve the health of their soils, investing in the legacy of their farm for future generations.

We have two product offerings for farmers:

Holganix Bio 800+ Revive

- Builds soil health
- Increases crop yield
- Reduces the need for fertilizer
- Promotes root growth, and speeds seed establishment.

Holganix Bio 800+ Thrive 2-0-0

- Enhances planter performance
- Breaks down crop residue
- Builds soil health
- Improves seed emergence
- Releases locked nutrients


holganix
Corn
Data

CORN YIELD DATA

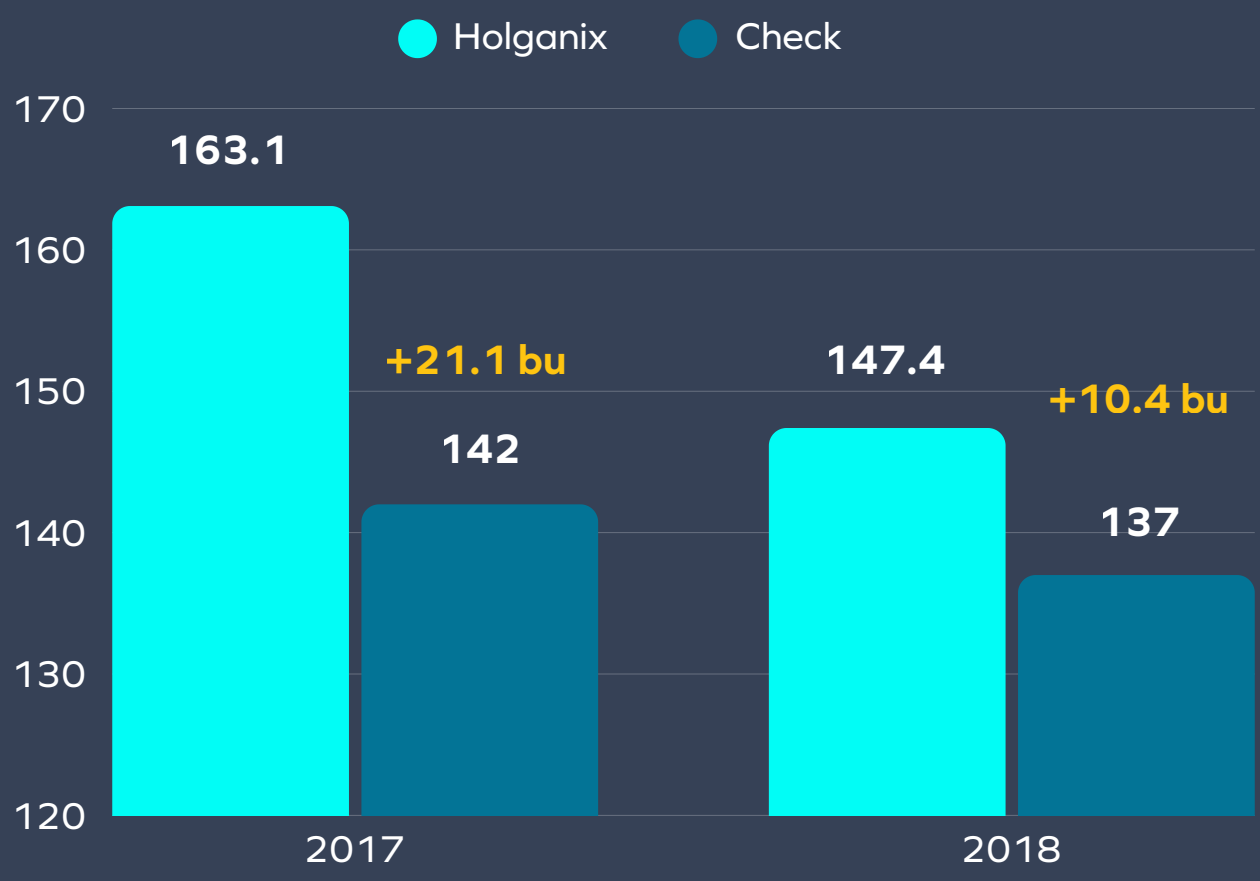
Replicated Plot Data
Western Missouri (2018)

Replicated plots, with 4 rows per rep. Rows were 500' long. Land was not irrigated. In 2018, the land saw minimal rain and was very stressed.

Holganix Bio 800+ Revive Treatment:
Rate: 0.5 gal per acre
App Timing: At planting
App Method: In-furrow
Other Products Used: Standard fertilizer. All other inputs were replicated in the control.

"Best looking corn plot on the farm!"

-Researcher

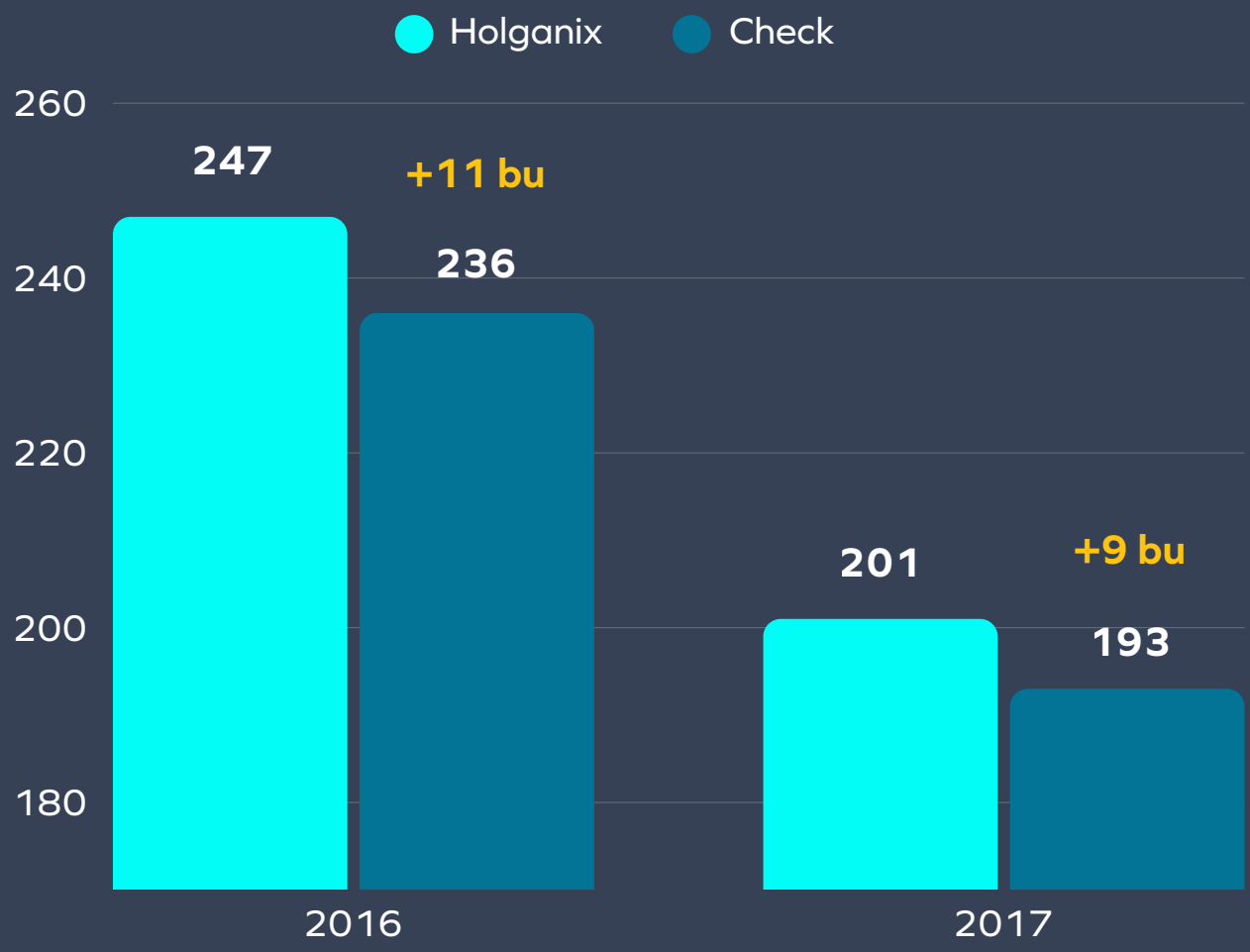


CORN YIELD DATA

Third Party Research Farm Data
North Central Illinois (2016 & 2017)

Replicated plots on non-irrigated land. The 2016 rotation was of soy. In 2017, the check used standard fertilizer while the Holganix Bio 800+ Revive trial used 20% reduction in fertilizer.

Holganix Bio 800+ Revive Treatment:
Rate: 0.5 gal per acre
App Timing: At planting
App Method: In-furrow



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CORN YIELD DATA

Beck's Practical Farm Research
Kentucky, Iowa, Minnesota, Wisconsin (2021)

In-furrow biological study. Note that Vertex and SB4400 are both PRF proven. This is the first year of PRF for Holganix.

In-Furrow Treatments	% Moisture	BU./A.	BU./A. Difference	ROI
Control: Starter (5 gal PureGrade Diamond 6-24-6)	17.7	238.4	--	--
Starter + 4.5 oz Terrasym 408/450	17.7	243.0	+4.6	+$17.64
Starter + 1 pt. Vertex-IF	17.7	243.1	+4.7	+$13.97
Starter + 2 qt. Holganix Bio 800+ Revive	17.7	241.9	+3.5	+$7.48
Starter + 1 pt. SB4400	17.8	241.0	+2.6	+$2.95

Corn $4.78/Bu., Vertex-IF $68.00/Gal., DB4400 $75.84/Gal., Terrasym 408/450 $123.75/Gal., Holganix Bio 800+ Revive $18.50/Gal.

These results are based on the disclosed study parameter and participating sites.

CORN YIELD DATA

Beck's Practical Farm Research
Iowa, (2021)

In-furrow biological study. Note that Vertex and SB4400 are both PRF proven. This is the first year of PRF for Holganix.

In-Furrow Treatments	% Moisture	BU./A.	BU./A. Difference	ROI
Control: Starter (5 gal PureGrade Diamond 6-24-6)	16.6	252.8	--	--
Starter + 4.5 oz Terrasym 408/450	16.7	258.8	+6.0	+$24.33
Starter + 1 pt. Vertex-IF	16.7	257.6	+4.8	+$14.45
Starter + 2 qt. Holganix Bio 800+ Revive	16.8	259.9	+7.1	+$24.69
Starter + 1 pt. SB4400	16.8	257.2	+4.4	+$11.56

Corn $4.78/Bu., Vertex-IF $68.00/Gal., DB4400 $75.84/Gal., Terrasym 408/450 $123.75/Gal., Holganix Bio 800+ Revive $18.50/Gal.

These results are based on the disclosed study parameter and participating sites.

CORN YIELD DATA

Reduced Fertilizer on Corn Third Party Research Trial Iowa (2021)

Fertilizer reduction occurred pre-plant/planting, not during the growing season.

Study	Acres	Dry Yield Bu/Acre
Check	89.2	211.0
Holganix Bio 800+ Revive & 5% fertilizer reduction	11.6	217.6
Holganix Bio 800+ Revive & 10% fertilizer reduction	12.0	213.5
Holganix Bio 800+ Revive & 20% fertilizer reduction	10.3	212.4

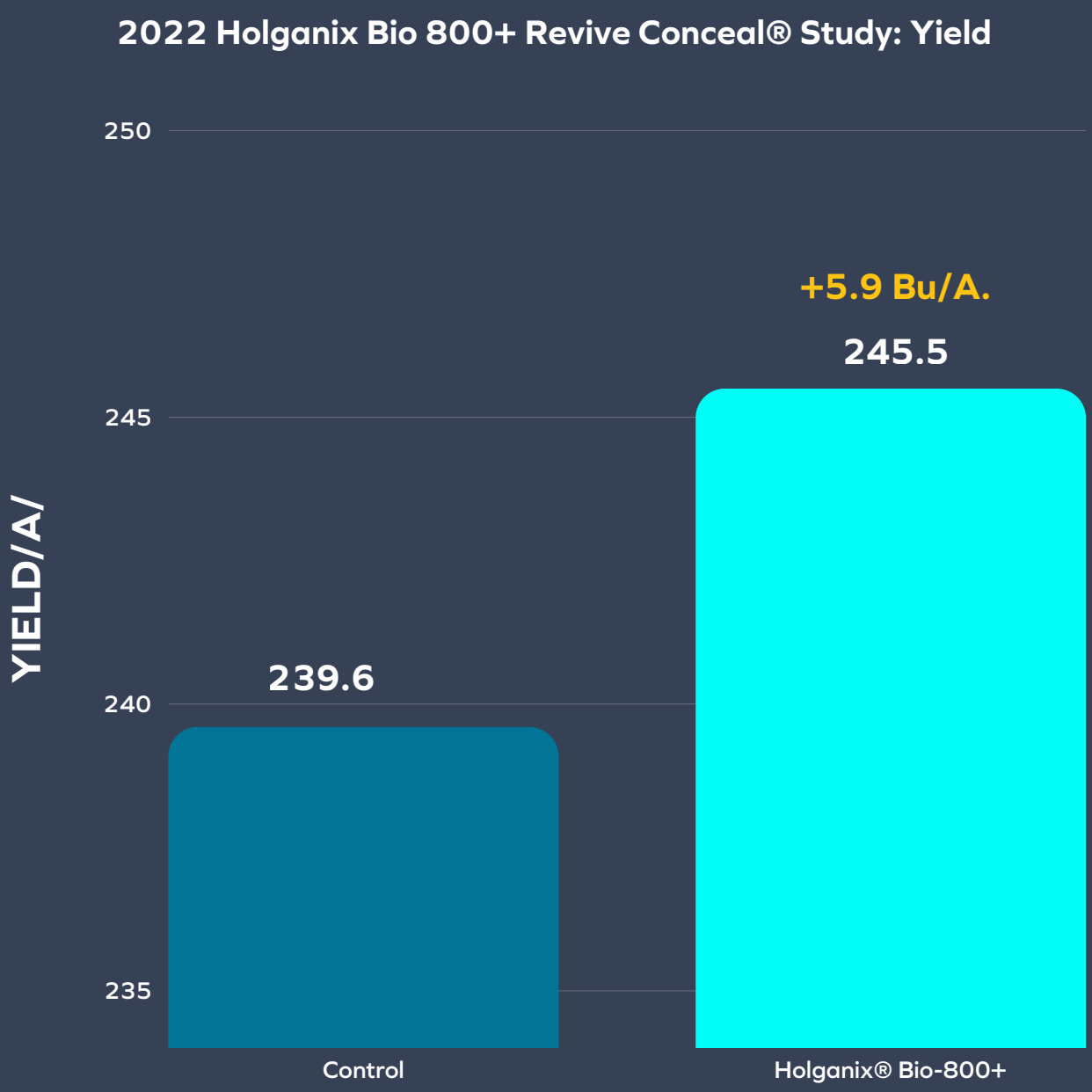
Third Party Research Trial Iowa (2020)

Yield conducted via Climate Fieldview

Treatment	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6
Holganix Acres	1.6	3.2	0.6	5.2	13.7	4.4
Holganix Bio 800+ Revive Bu/Ac	271	271	211	265	248	227
Check Acres	1.6	3.2	0.7	7.8	19.3	11
Check Bu/Ac	242	249	240	224	205	211
Holganix Bu/Ac Increase	29	22	-29	41	43	16

CORN YIELD DATA

Precision Planting PTI Farm Research Summary
Third Party Research Trial
Illinois, 2022



Holganix Bio-800+ Revive resulted in yield gains of +5.9 Bu/A. At $6 corn and $18/A. cost of product, positive economic gains tallied in at $17.40/A.

CORN YIELD DATA

Alternating Strip Design Wisconsin (2021)

8 checks, 9 treatments

Field	Yield (Bu/A)	Moisture	Acres	Std Dev	Min	Max
Check	178.7	21.32	25.25	22.57	87.36	233.01
Holganix	182.9	21.06	26.35	20.83	87.24	255.09

CORN YIELD DATA

Third Party Research Trials North Carolina (2022)

Crop	Trial	App Method	Soil Type	Yield (Bu/A)
Corn	Holganix Bio 800+	In-Furrow	Light Soil (<1% OM)	120.5
Corn	Check	In-Furrow	Light Soil (<1% OM)	111.7
Corn	Holganix Bio 800+	In-Furrow	Heavy Soil (>8% OM)	222.5
Corn	Check	In-Furrow	Heavy Soil (>8% OM)	218.3
Corn	Holganix Bio 800+	Side Dress w/ 24% N	<2% OM	129.4
Corn	Check	Side Dress w/ 24% N	<2% OM	114.1

CORN YIELD DATA

Third-Party Research Data, Maryland (2022)

Demonstrating bushels per acre

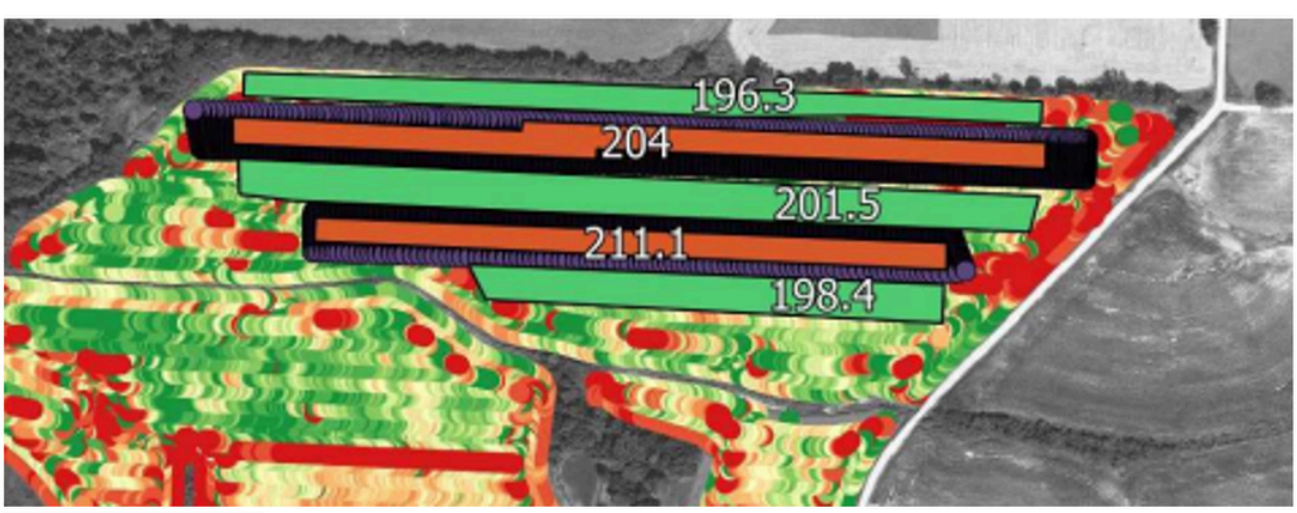
Field	Rep 1	Rep 2	Rep 3	Rep 4	Average
Check	177	190	184	177	182
Holganix	191	198	194	203	197

Note:

- Each rep includes 6, 30" rows, 100' long
- Holganix Bio 800+ Revive applied in-furrow at 0.5 gal per acre, mixed with 5 gal 7-17-4 and water to 12.3 gal per acre.

CORN YIELD DATA

Third-Party Research Data, Northwest Tennessee (2021)



CORN YIELD DATA

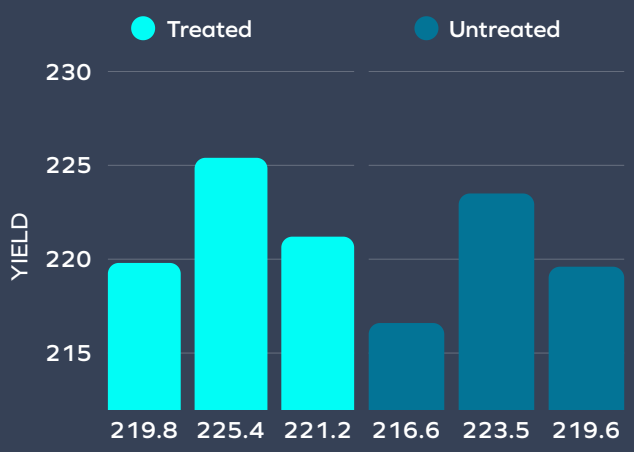
Agronomy 365
Third Party Research Trial
Wessington, South Dakota (2021)

Field	Acres	Trial	Yield	Bu/Ac
North	3	Hybrid – A9647VT2P; Treatment – PB, HEF, 20-18-12-6, Bio 800+ Revive	194	+8
North	3	Hybrid – A9647VT2P; Treatment – PB, HEF, 20-18-12-6	186	
South	4	Hybrid – A9647VT2P; Treatment – PB, HEF, 20-18-12-6/Bio 800+ Revive	179	+11
South	3.9	Hybrid – A9647VT2P; Treatment – PB, HEF, 20-18-12-6	168	

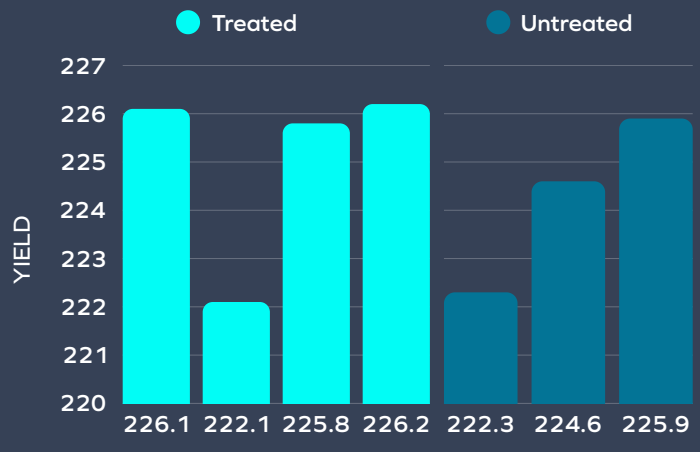
Third Party Research Trial
Spring Grove, Minnesota (2021)

Holganix Bio 800+ Revive saw 3+ bu/ac gains and had higher percent wins over the control.

Field 1



Field 2



CORN NUTRIENT DATA

Agronomy 365
% Win
Multiple U.S. States (2021)

The percentage of improved nutrient scores, at the specific growth stage, are charted below for all locations.

	N	P	K	S	Mg	Ca	Zn	Fe	Mn	Cu	B
V4	0%	100%	100%	50%	100%	100%	50%	50%	50%	100%	50%
V8	100%	100%	66%	0%	33%	33%	66%	33%	33%	33%	66%
V12	66%	66%	33%	66%	66%	100%	66%	66%	33%	66%	66%
VT	33%	33%	66%	33%	66%	33%	66%	66%	66%	66%	100%
R2	50%	0%	50%	50%	50%	50%	50%	100%	50%	50%	50%
R4	100%	50%	0%	100%	50%	50%	50%	100%	50%	50%	100%

Scores of 66% or higher are charted below. **Bold denotes a 100% win.**

N	P	K	S	Mg	Ca	Zn	Fe	Mn	Cu	B
V8*	**V4***	**V4***	V12	**V4***	**V4***	V8	V12	VT	**V4***	V8
V12	**V8***	V8	**R4***	V12	**V12***	V12	VT		V12	V12
R4*	V12	VT		VT		VT	**R2***		VT	**VT***
							R4*			**R4***

Leaf tissue, treated vs untreated % difference
Iowa and Nebraska (2022)

	N	P	K	S	Mg	Ca	Zn	Fe	Mn	Cu	B	Al	Mo
V4	8%	-6%	0%	-7%	0%	3%	30%	-4%	33%	7%	-8%	2%	25%
V8	-11%	1%	-1%	12%	4%	9%	-2%	5%	22%	9%	18%	5%	-10%
V12	9%	18%	20%	18%	20%	18%	34%	4354%	20%	28%	34%	-33%	8%
VT	-11%	-14%	4%	-24%	5%	-9%	-13%	-7%	-2%	-17%	-37%	32%	-19%
R2	-9%	3%	6%	-6%	0%	-5%	-1%	17%	32%	-3%	0%	22%	-35%
R4	11%	49%	11%	32%	30%	36%	16%	33%	17%	46%	-1%	14%	29%

BOOSTS GROWTH AND YIELD

Data Collected by Heartland Coop Yields Across Iowa (2023)

County	Added bushels
Dallas	10 bu/ac corn
Fremont	6 bu/ac corn
Jasper	7 bu/ac corn
Otoe	12 bu/ac corn
Carroll	11 bu/ac corn
Warren	14 bu/ac corn
Pottawatamie	15 bu/ac corn
Otoe	9 bu/ac corn
Mills	13 bu/ac corn
Iowa	9 bu/ac beans
Mills	3.9 bu/ac beans
Warren	7 bu/ac beans



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Soybean Data



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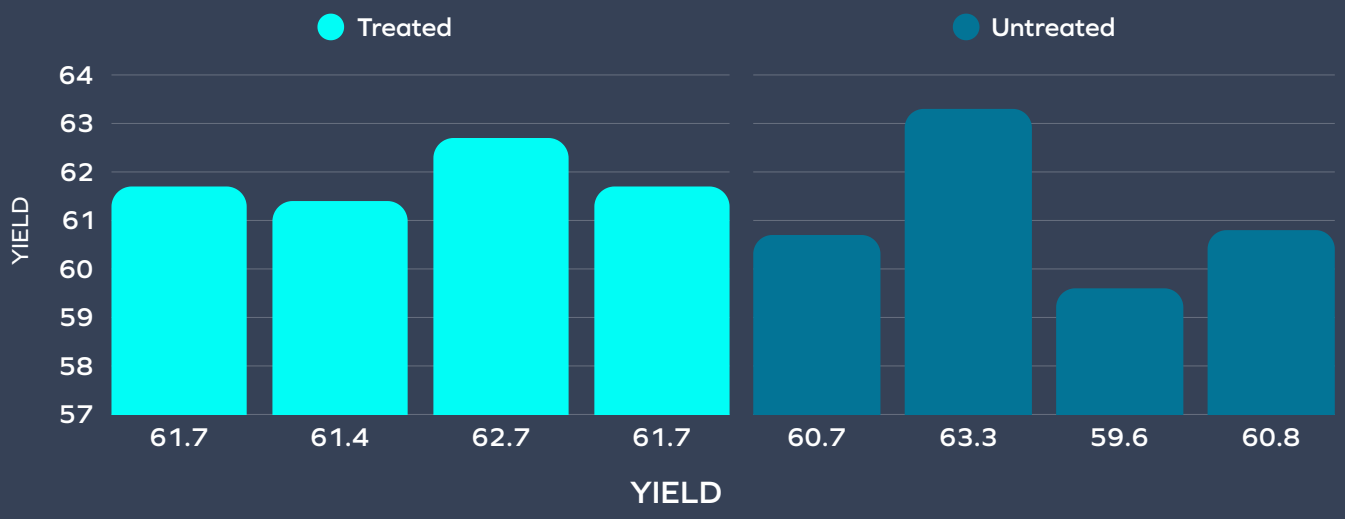
SOYBEAN YIELD DATA

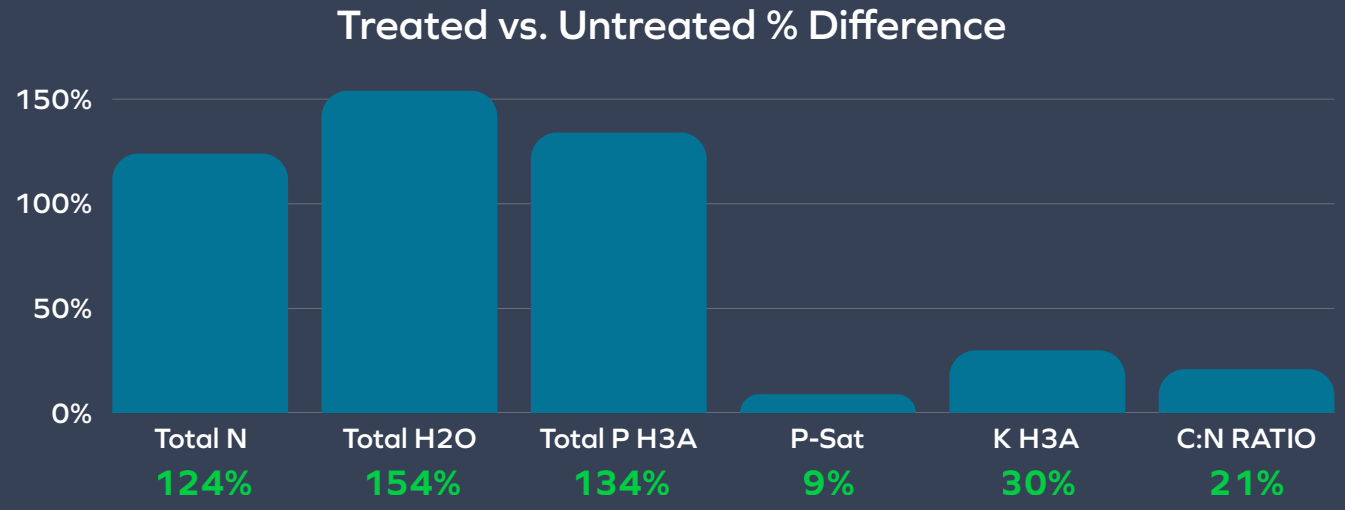
Third-Party Research Trial
Spring Grove, Minnesota (2021)

Holganix Bio 800+ Revive saw 1+ bu/ac gains and high percentage wins over the control. Soybeans were replanted.



Third-Party Research Trial
Iowa and Minnesota (2022)

Soil, Nutrient Percentage Differences:

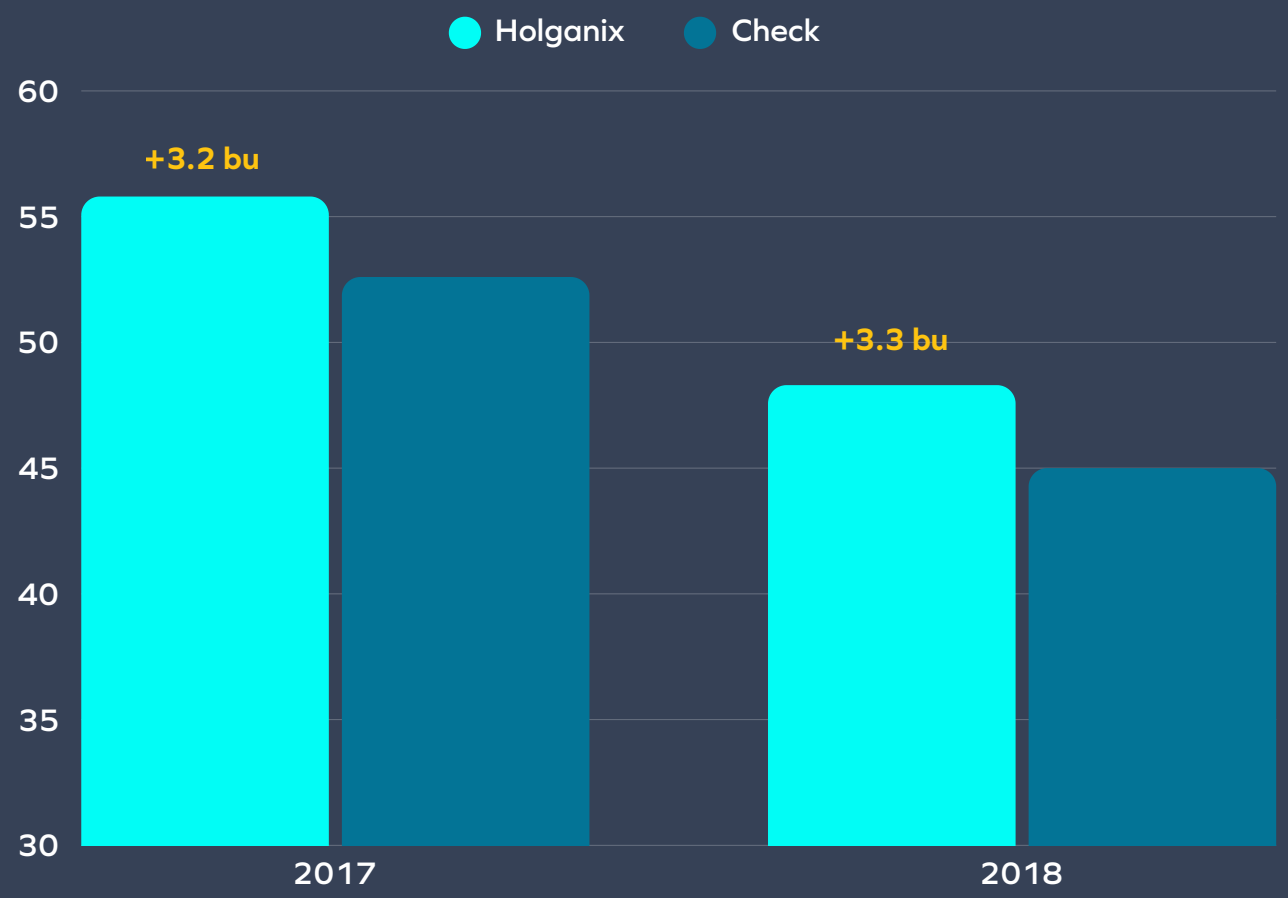


SOYBEAN YIELD DATA

Third Party Research Farm Data
Western Missouri (2018)

Conditions: Replicated plots, with 4 rows per rep. Rows were 500' long. Land was non-irrigated. In 2018, the land saw minimal rain and was very stressed.

Holganix Bio 800+ Treatment:
Rate: 0.5 gal per acre
App Timing: At planting
App Method: In-furrow
Other Products Used: Standard fertilizer. All other inputs were replicated in the control.



SOYBEAN YIELD DATA

Third Party Research Trials
North Carolina (2022)

Crop	Trial	App Method	Soil Type	Yield (Bu/A)
Soybeans	Holganix Bio 800+	In-Furrow	Light Soil (<1% OM)	52.0
Soybeans	Check	In-Furrow	Light Soil (<1% OM)	50.0
Soybeans	Holganix Bio 800+	In-Furrow	Heavy Soil (>10% OM)	58.7
Soybeans	Check	In-Furrow	Heavy Soil (>10% OM)	56.7

Third Party Research Trial
Ankeny, Iowa (2022)

Five acres of data. No fertilizer reductions were made. The competitor gave seven different products to apply and did tissue samples four times during the year.

"He called it a flop. We outperformed for a much lower price and much easier application" - Grower

Treatment	Bu/Ac
Holganix Bio 800+ Revive	53.717
Check	48.12
130 acre field average	49

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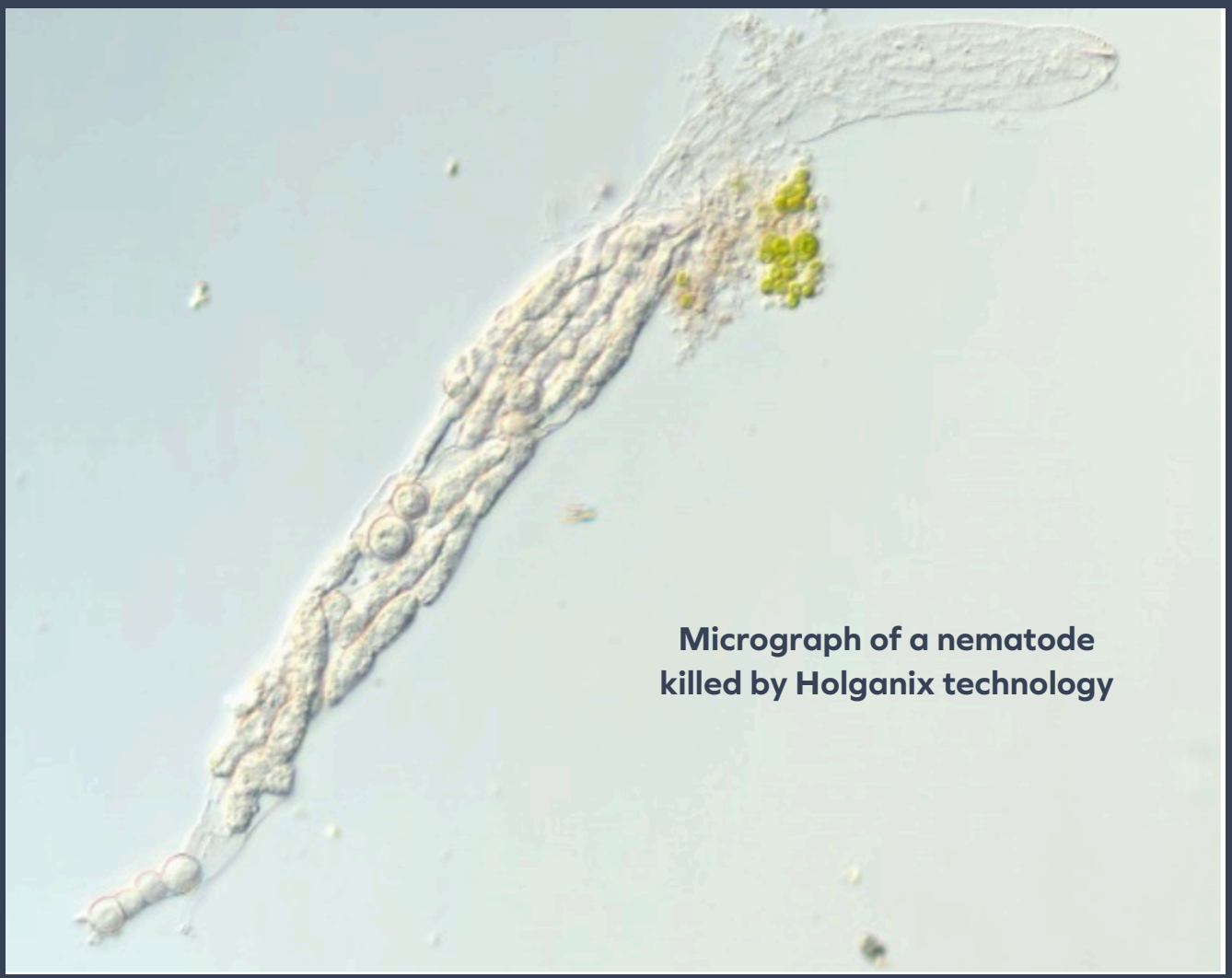
SOYBEAN NEMATODE DATA

University of Illinois study using an "un-named" Holganix microbial technology that is currently under development.

- Soybean cyst nematodes
- 2 years of replicated, multi-site field data.
- Ground naturally infested, plus plants inoculated with SCN eggs.
- A 6.3+ higher yield was seen with the Holganix technology over the control.
- 75-80% reduction in nematodes at the end of the season, with just one application at planting. This is well below the level where nematodes cause economic loss.



Micrograph of a nematode killed by Holganix technology

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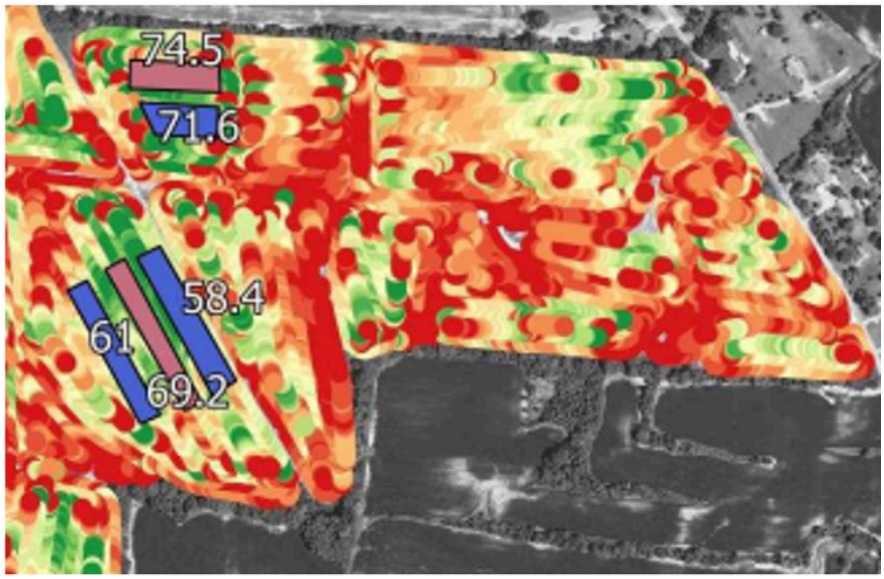
SOYBEAN YIELD DATA

Third Party Research Trial
Northwest Tennessee (2021)

7 bushel gain
Cost of $10/ac
Net gain of $90/ac ($14.25/bu)



Holganix Application
Holganix
No Application


holganix
Wheat
Data

WINTER WHEAT

Third Party Research

Holganix Cohort	Spring Only		Fall Only		Fall & Spring	
	% +/- Control	Win/Total Trials	% +/- Control	Win/Total Trials	% +/- Control	Win/Total Trials
1	10%	4/5	4%	2/2	2%	1/1
2	11%	5/5	1%	1/1		
3	-7%	3/5	1%	1/1	1%	1/1
4	8%	1/1	8%	1/1	8%	1/1
5	2%	4/6	11%	2/2	3%	1/1
6	32%	1/1				
7	2%	1/1	2%	1/1	2%	1/1
Weighted Average	4.2%	19/24 (79%)	5.8%	7/8 (88%)	3.8%	5/5 (100%)

Holganix, partnered with third-party researchers to evaluate Holganix Bio 800+ Revive performance on 5,000 acres of winter wheat across 37 locations, spanning seven states, from Oklahoma to Ohio.

- Eight locations were treated with Holganix Bio 800+ Revive at 0.5 gallons/acre at planting in the fall. The fall-treated locations saw 88% wins over the control.
- Twenty-four locations received spring applications at 0.5 gallons per acre when the crop began growing again. The spring-treated locations saw 79% wins.
- Five locations received both a fall and spring application and saw 100% wins.

For many major Agtech companies, a product is deemed commercially viable if the win total % meets or exceeds 70%. A 79% win would be viewed as a strong result, while 88% or 100% would be viewed as exceptional.

DURUM WHEAT YIELD DATA

Third Party Research Trial
Montana (2020)

Spring application of Holganix Bio 800+ Revive at 0.5 gal per acre.

Field One

Treatment	Yield Bu/Acre	Return/Acre*	Total Acres
Holganix Bio 800+ Revive	47.29	$283.72	58.72
Control	42.42	$254.51	31.5
Holganix Benefit	4.87	$29.21	

Field Two

Treatment	Yield Bu/Acre	Return/Acre*	Total Acres
Holganix Bio 800+ Revive	51.07	$306.39	57.2
Control	46.69	$280.15	19.96
Holganix Benefit	4.38	$26.24	

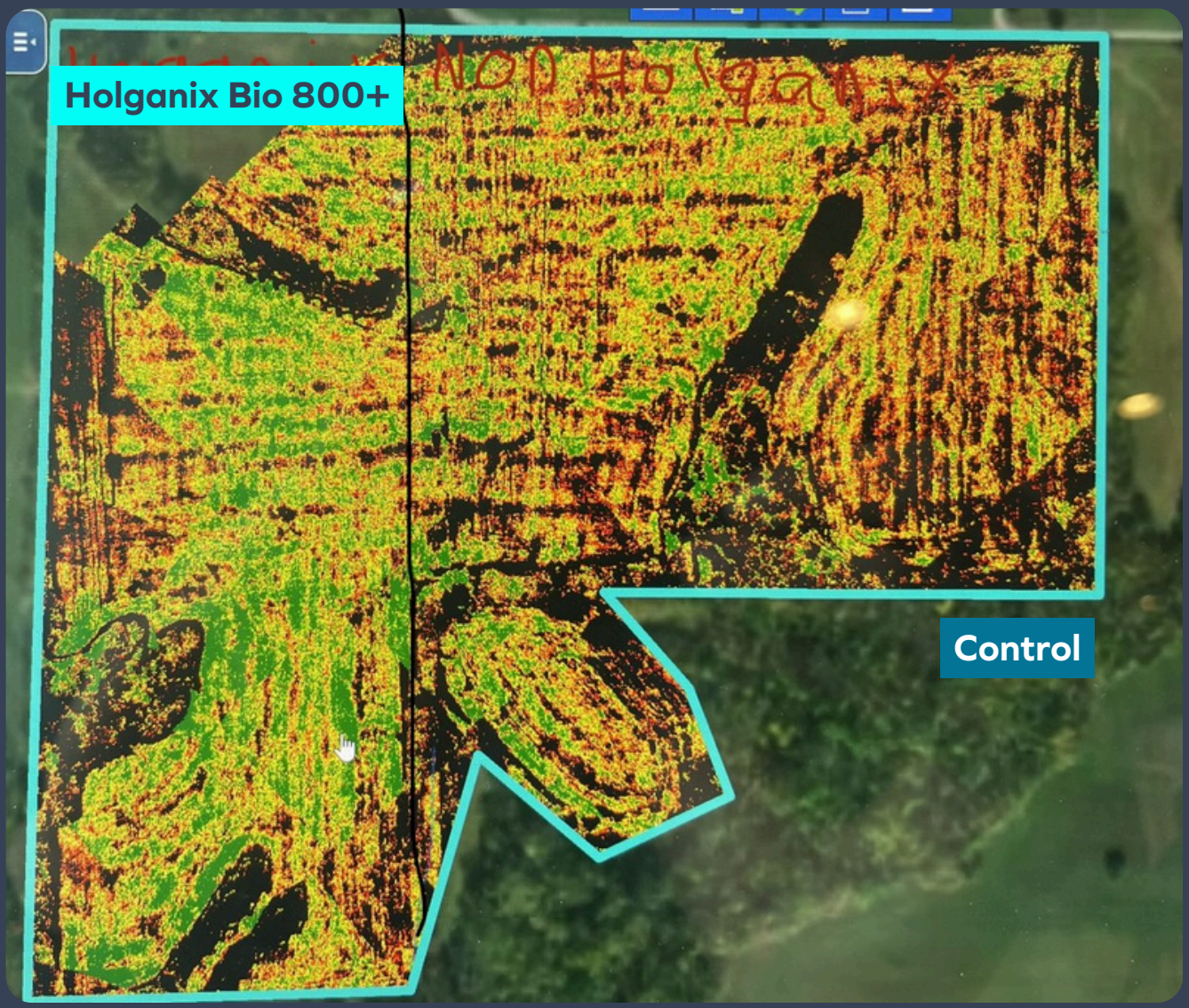
Two different fields, treated and check adjacent in the field.
* $6/bu price

WHEAT YIELD DATA

Northwest Missouri (2022)

The wheat shown below was planted on November 16, 2021. This drone NDVI image was taken on May 19, 2022. The grower did a foliar application of Holganix Bio 800+ Revive on April 19, 2022. The photo demonstrates that the Holganix-treated part of the wheat field is much healthier than the control.

Holganix Bio 800+ Treatment:
Rate: 0.5 gal per acre
App Method: Foliar




holganix
Cotton
Data

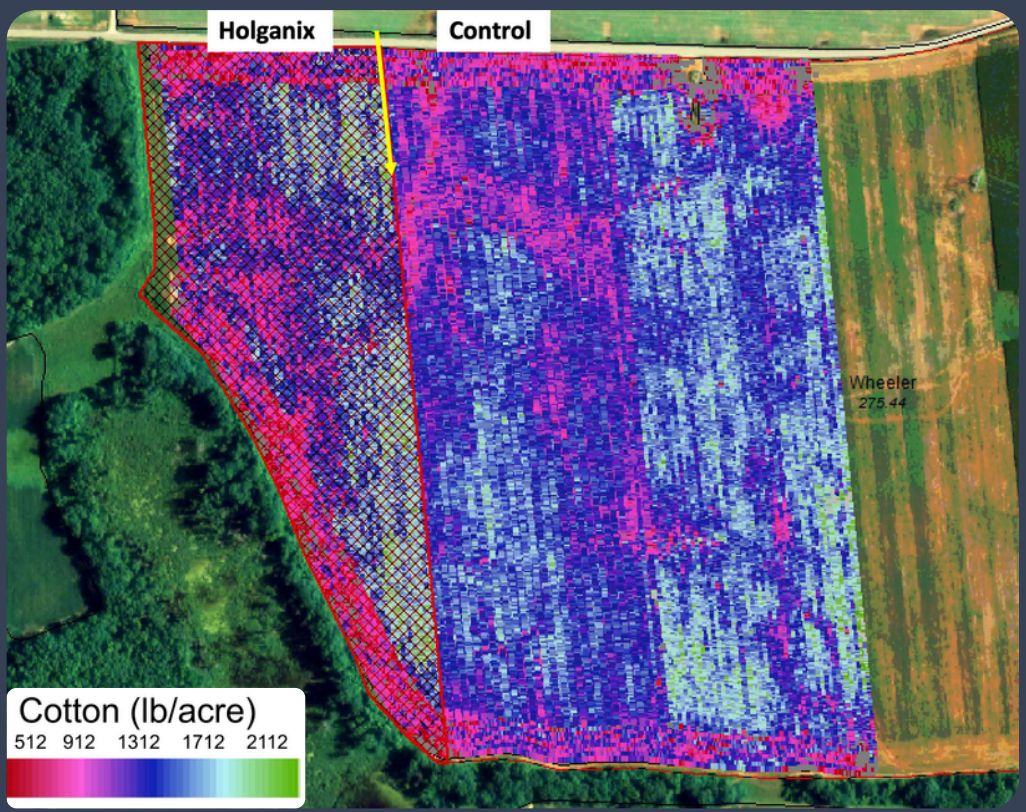
COTTON YIELD DATA

Third Party Research Trials
North Carolina (2022)

Crop	Trial	App Method	Soil Type	Yield (Lint LBS/Ac)
Cotton	Holganix Bio 800+	Side Dress w/ 28% N	>8% OM	1347
Cotton	Check	Side Dress w/ 28% N	>8% OM	1318

Third Party Research Trial
Alabama (2017)

Note: The yellow arrow marks the boundary between the Holganix Bio 800+ treated rows and the untreated rows. The distinct shift from lower-yielding blue areas to higher-yielding yellow areas at the treatment boundary highlights the significant yield advantage associated with the Holganix treatment.





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Rice & Produce Data

RICE YIELD DATA

Third Party Research Trial Mississippi (2021)

$45.50 per acre higher return at $7 per bushel

Acres	Rice	Applied	Control	Difference
110	E21	227.24	213.40	13.84
70	ST1	231.17	227.83	3.34
72	ST2	202.58	196.62	5.96
77	ST10	210.15		2.87
59	ST11		207.28	
398		217.79	211.28	6.50

RED POTATO YIELD DATA

McVille, North Dakota (2017)

'Red Dark Norland', Pifer E

Trial	% Stand	Stems / Plant	Set	% Jumbo	% Premiums	% A	% B	% C	Total Yield, cwt/a	% <3 1/8" - >1 5/8"
Holganix 1	70.31%	5.22	9.25	9%	47%	14.20%	19.08 %	11.21 %	491.10	79.2%
Holganix 2	71.88%	4.45	9.08+	9%	47%	13.65%	20.11 %	10.75 %	506.20	80.1%
Holganix 3	78.13%	5.16	9.94	8%	40%	12.85%	24.23 %	15.52 %	471.80	79.4%
Control	71.88%	4.67	9.04	9%	47%	13.27%	18.36 %	12.35 %	473.90	79.2%
59	ST11		207.28							
398		217.79	211.28	6.50						

Treatment List

Holganix 1: 1 gal/ac Holganix Bio 800+ Revive, applied in-furrow, mixed with starter fertilizer

Holganix 2: 2 gal/ac Holganix Bio 800+ Revive, applied in-furrow, mixed with starter fertilizer + 1 gal/ac Holgnaix Bio 800+ Revive applied side dress

Holganix 3: 1 gal/ac Holganix Bio 800+ Revive applied side dress

YIELD DATA AND FERTILIZER REDUCTIONS ON POTATOES

A compilation of Idaho and North Dakota commercial growers, Washington State University

Russet Potaotes

Acres	Treatment	Benefit
2016 Idaho Commercial Growers	Bio 800+ Revive, Standard Fertility	+44-62 cwt/acre. Amounting to a 10-16% yield gain. Size shift to higher payable yield. $352-$496 per acre advantage.
2017 Idaho Commercial Growers	Bio 800+ Revive, Standard Fertility	+52 cwt/acre, size shift to higher payable yield. $416/acre advantage.
2016 Washington State University	Bio 800+ Revive, 20% reduction in fertilizer	Same weight/acre, but shift to larger size and increased payable yield. $200/acre advantage.

Red Potatoes

Acres	Treatment	Benefit
North Dakota Commercial Growers	Bio 800+ Revive , Standard Fertility	+18-33 cwt/acre, size shift to higher payable yield

RUSSET POTATO YIELD DATA

Commercial Grower Trials
Two Separate Farms
Idaho

'Red Dark Norland', Pifer E

Treatment	Gross Yield/Ac	Ave Tu. Wt.	Weight/10' plot 0-6	Weight/10' plot 6 to 10	Weight/10' plot >10
Holganix Bio 800+ Revive 1 gal/ac	458.91741	6.454054	4.05	16.2	8
Control	396.65224	5.814085	5.55	15.75	4.75
Holganix Bio 800+ Revive 1 gal/ac	501.96494	5.557447	15	8.75	7.85
Control	458.14871	5.418182	14.2	8.55	7.7

Treatment List

Apply 1 gal/ac Holganix Bio 800+ Revive for potatoes, diluted to at least 4 gal/ac total liquid (may be mixed with fertilizer), at planting in a liquid band 2 inches to each side and above the seed piece. May be applied in-furrow or foliar post-emergence (use enough water to penetrate to the root zone).

Holganix Bio 800+ Revive is compatible with fertilizers, herbicides, insecticides, and some fungicides. Liquid banded is preferred to in-furrow application to avoid contact with fungicides.

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RUSSET POTATO REDUCED FERTILIZER DATA

Washington State University

Treatment	Process Adjust. Gross $/AC	Total Yield CWT/AC	Total Market Yield	U.S. 1s >4 oz %	U.S. 2s >4 oz %	Culls & <4 oz %	Process Yield US 1 & 2s >6 oz %	Tuber Weight oz	Tuber Number Per Plant	Specific Gravity
33% of Grower Standard fertilizer	3510	658	613	74	2	24	50	6.4	8.5	1.1013
Bio 800+ Revive & 33% of Grower Standard fertilizer	3480	678	615	73	1	26	48	6.3	8.9	1.1010
66% of Grower Standard fertilizer	3840	698	616	73	1	26	57	7.5	7.8	1.0899
Bio 800+ Revive & 66% of Grower Standard fertilizer	4030	699	647	78	1	21	59	7.0	8.3	1.0910

Note:

33% and 66% refer to the amount of preplant fertilizer applied versus the grower standard. In-season fertilizer was not reduced. Total fertilizer reductions are 40% and 20%.

While reducing fertilizer 20% and using Holganix Bio 800+ Revive gave a higher marketable yield versus the check, we aren't yet recommending this level of fertilizer reduction without additional studies.

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INCREASE SIZE AND YIELD IN POTATOES

2017 Trials
Idaho Commercial Growers *and* Washington State University

Full Fertilizer

Idaho Commercial Grower Trials	Gross Yield CWT/A	Yield Gain CWT/A	Avg Tu. Wt	Value @ $7/CWT
Holganix Bio 800+ Revive	459	62	6.5	$434
Control	397	-	5.8	-
Holganix Bio 800+ Revive	502	44	5.6	$308
Control	458	-	5.4	-

20% Less Fertilizer

Washington State University Trials	Process Adjusted Gross $/A	Total Yield CWT/A	Total Market Yield
Holganix Bio 800+ Revive with 20% less preplant fertilizer	3840	698	616
20% less preplant fertilizer	4050	699	647

Note:

- Up to +52 cwt/acre payable yield, Idaho Russets
- +18-33 cwt/acre red potatoes, North Dakota

TOMATO YIELD DATA

Research Grower Data
Indiana (2015)

According to the grower, **"Holganix Bio 800+ Revive treated tomatoes yielded 51.3 tons per acre while the untreated came in at 46.7 tons per acre. That's a 10x payback over the cost of the Holganix Bio 800+ Revive used per acre."**

The grower used the product over 4 years on processing tomatoes and saw 2 to 4 tons per acre yield increases.

Holganix Bio 800+ First App:
Rate: 2 gal per acre
App Timing: At planting
App Method: Foliar
Other Products Used: Standard Inputs

Holganix Bio 800+ 2nd & 3rd App:
Rate: 1 gal per acre
App Timing: At 4 and 8 weeks after transplanting
App Method: Foliar
Other Products Used: Standard Inputs



INCREASED BRIX INDEX

Multiple Farms Northeast U.S.

Crop	Control	Holganix Bio 800+ Revive
Peas	6	16
Sweet Corn	8	25
Raspberries	8	14
Strawberries	7	11
Tomatoes	12	15
Watermelon	10	16
Alfalfa	12	21

Note:

- Besides better taste, there is some evidence that increased Brix leads to reduced insect pressure.

GRAPES

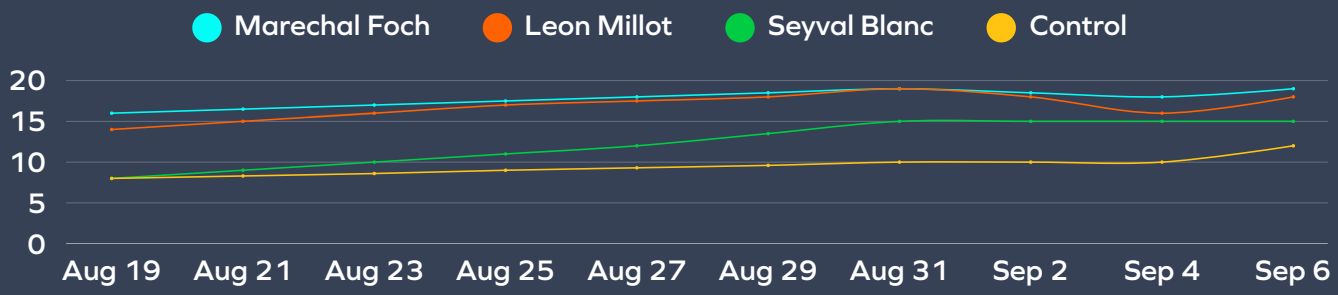
Research Grower Data Massachusetts

- Average yields more than doubled since using Holganix Bio 800+ Tree & Shrub
- 26% increase in Brix from 2013-2015
- Natural reduction in powdery mildew

Yield Measured Over Time

Year	Treatment	Yield
2013	Control	395 Lbs
2014	Holganix Bio 800+ Tree & Shrub	857 Lbs
2015	Holganix Bio 800+ Tree & Shrub	968 Lbs

Brix Degrees Measured Over Time



Program - Organic Botrytis cinerea Suppression

Spray 2.25 gal Holganix Bio 800+ Tree & Shrub per 200 gallons of spray solution. Applied weekly from bud break to harvest. Early sprays should be directed at all the wood and allowed to runoff to the soil. Subsequent sprays should be directed at the foliage and wood.

Standard Program

Same rate as above applied at bud break (wood and basal), and foliar 14 days later, prior to flowering and fruit set.

BLACKBERRY YIELD DATA

North Carolina (2022)

Treatment	8/12/22	8/18/22	8/24/22	9/1/22	Average
Holganix Bio 800+ Tree & Shrub wt/berry (g)	9.1	8.2	8.2	8.8	8.6
Check wt/berry (g)	7.7	6.2	7.0	7.5	7.1
Holganix Bio 800+ Tree & Shrub Brix	9	9.3	9	N/A	9.1
Check Brix	8	9	7.7	N/A	8.2

Note:

Over the 4 pickings, Holganix Bio 800+ Tree & Shrub-treated berries were 21% heavier and had 11% higher Brix.

BLUEBERRY YIELD AND BRIX DATA

Third Party Research Farm Michigan (2021)

Picked: July 27, 2021

Treatment	Avg Weight/Berry (g)	Brix/Acid Ratio
Check	1.62	17.8
Holganix Bio 800+ Tree & Shrub	1.67	20.1

Picked: August 10, 2021

Treatment	Avg Weight/Berry (g)	Brix/Acid Ratio
Check	1.16	24.9
Holganix Bio 800+ Tree & Shrub	1.51	31.7

Note:

- Includes data from 5 locations across the farm; 5 reps per location
- Each sample was 250 grams per rep
- Blueberry size (avg weight/berry) is the significant yield indicator
- Higher Brix/acid indicates a sweeter taste

Program:

- Fall 1 gal/acre during bud set, banded under bushes
- Early spring, tight cluster, 1 gal/acre ground applied
- Bud break, 1 qt/acre foliar or drip
- Early pink bud, 1 qt/acre foliar
- Petal fall, 1 qt/acre foliar
- Mid-green berry stage, 2 qts/acre foliar
- Every application mixed with 1 pint 3-18-18 except last 2 with 1 qt.

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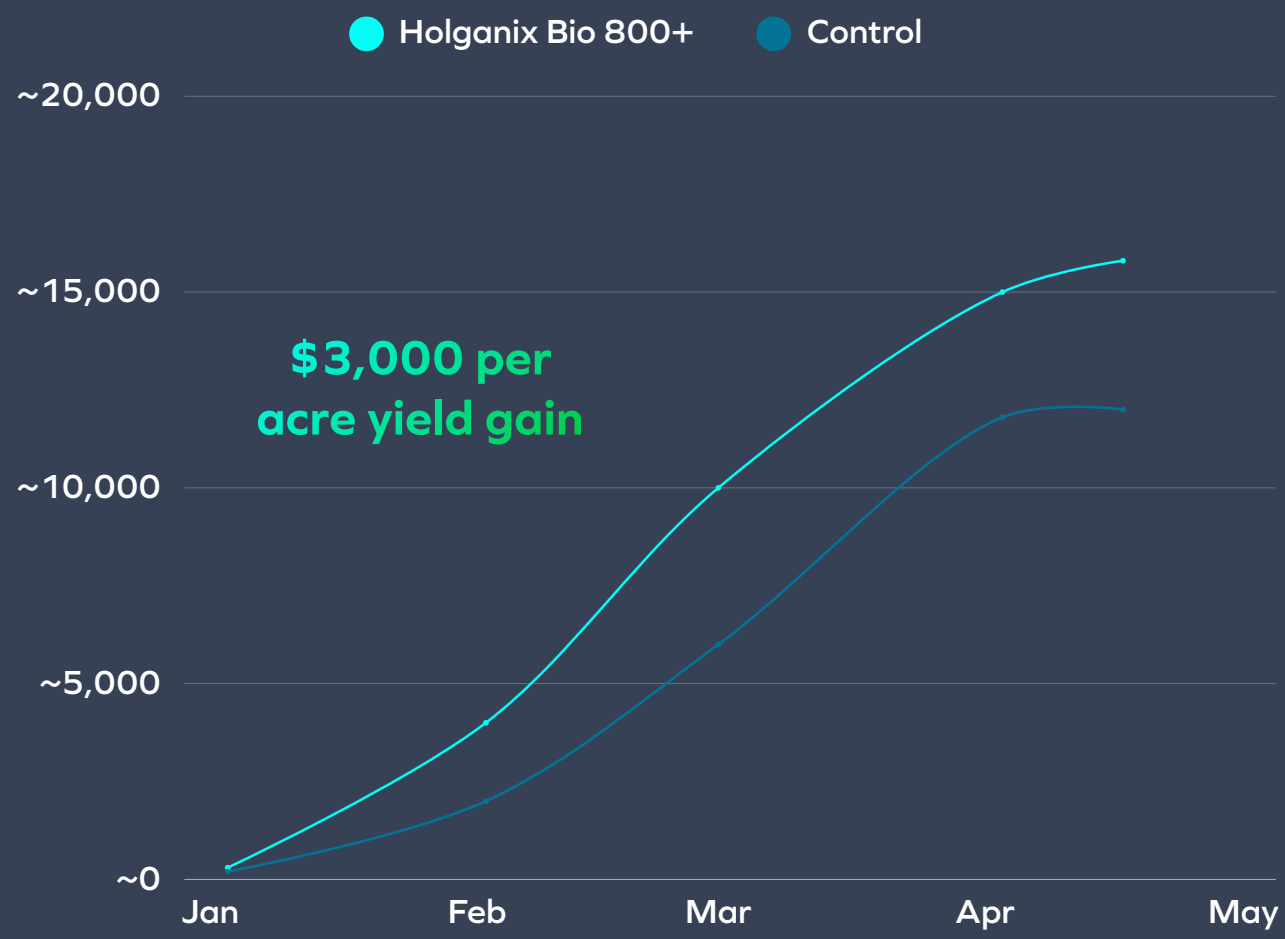
STRAWBERRY YIELD DATA

Research Grower Data California (2017)

In Ventura county, California, a researcher used Holganix Bio 800+ Revive on a commercial field. He achieved a $3,000 per acre higher yield in the strawberries and was able to harvest earlier than other growers.

Holganix Bio 800+ Treatment:
Rate: 2.4 gal per acre
App Timing: 1 application every month
App Method: Drip
Other Products Used: All other inputs were replicated in the control.



GERMINATION DATA

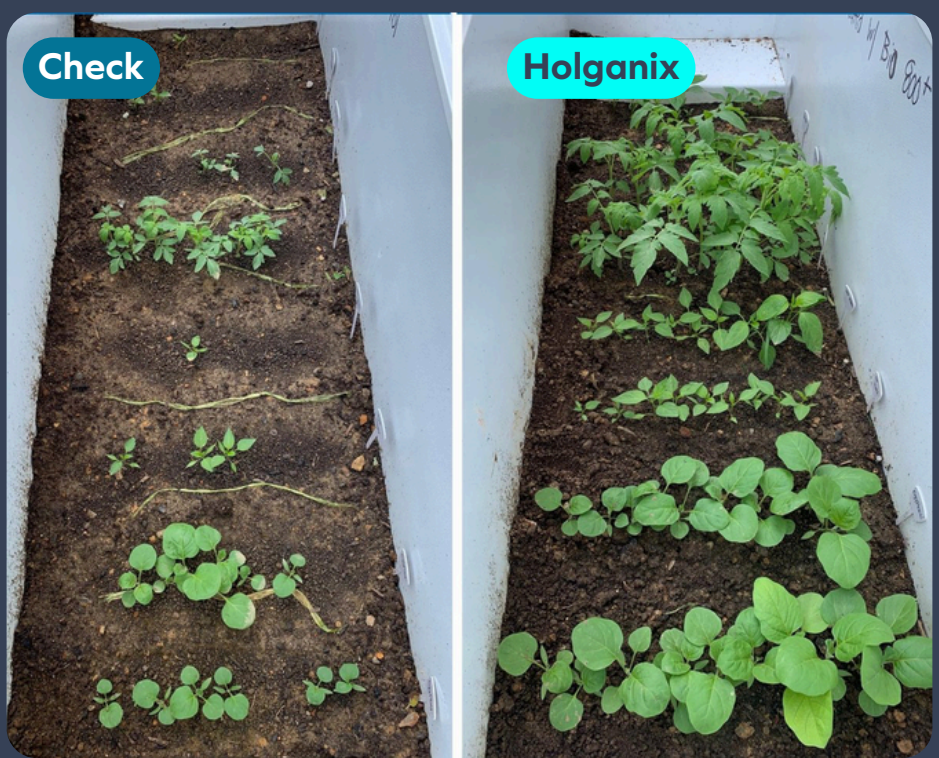
In-House Data
Pennsylvania (2021)

In Ventura county, California, a researcher used Holganix Bio 800+ Revive on a commercial field. He achieved a $3,000 per acre higher yield in the strawberries and was able to harvest earlier than other growers.

Crop	Check	Holganix Bio 800+ Revive
Pepper	9/20 (45%)	16/20 (80%)
Tomato	12/20 (60%)	17/20 (85%)
Jalapeños	12/20 (60%)	18/20 (90%)
Eggplant	17/20 (85%)	20/20 (100%)

Note:

2 oz per gallon at planting, and two more times during the growing season.



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ROOT MASS AND LENGTH DATA

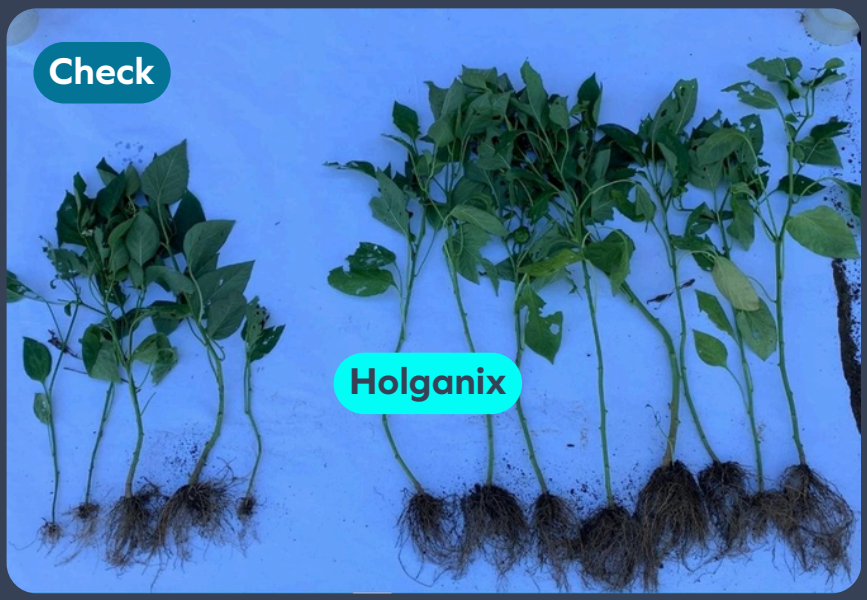
In-House Data
Pennsylvania (2021)

Treatment	Crop	Root Mass (g)	Root Length (in)
Check	Pepper	7.03	5.03
Holganix Bio 800+ Revive	Pepper	17.15	9.20
Check	Tomato	4.39	8.57
Holganix Bio 800+ Revive	Tomato	9.19	9.02
Check	Eggplant	13.21	8.76
Holganix Bio 800+ Revive	Eggplant	63.17	12.16

Note:

2 oz per 1 gallon of water at planting, and two more times during the growing season.

Bell Pepper Roots



GERMINATION DATA

In-House Data
Pennsylvania (2022)

Crop	Check	Holganix Bio 800+ Revive
Pepper	5/10 (50%)	6/10 (60%)
Tomato	7/10 (70%)	8/10 (80%)
Jalapeños	9/10 (90%)	10/10 (100%)
Eggplant	9/10 (90%)	10/10 (100%)

Note:

2 oz per 1 gallon of water at planting, and two more times during the growing season.



GERMINATION DATA

In-House Data
Pennsylvania (2022)

Crop	Check	Holganix Bio 800+ Revive
Peas	9/10 (90%)	10/10 (100%)

Note:

2 oz per 1 gallon of water at planting, and two more times during the growing season.



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Additional Data



SOIL TEST

Northern Illinois (July 11, 2023)

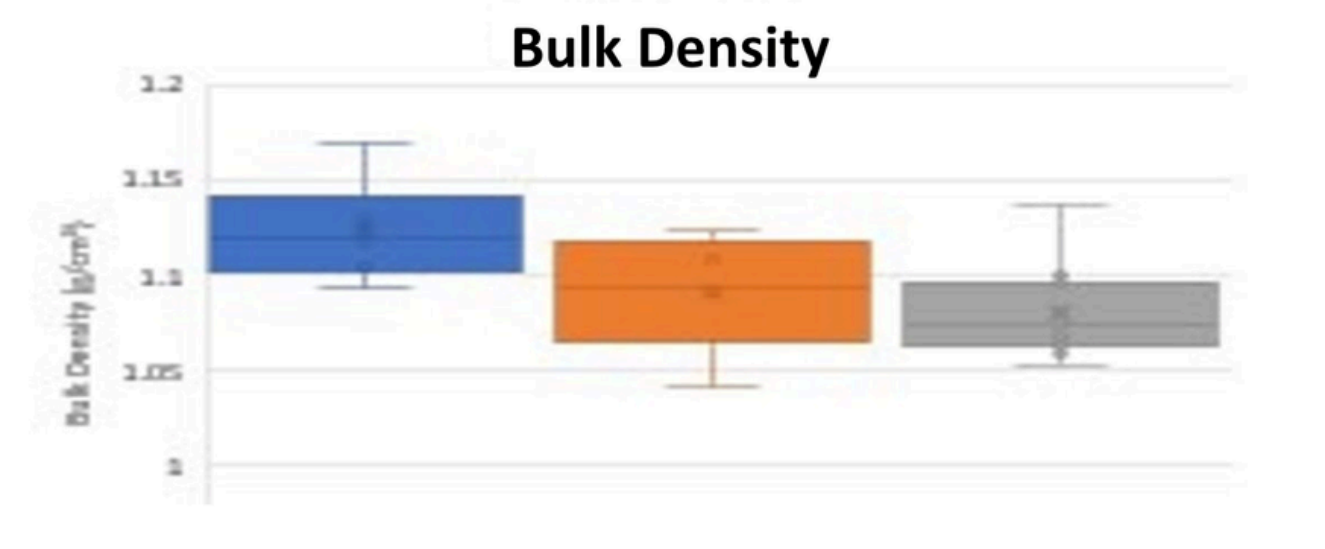
Bio 800+ applied in fall and then spring

ppm or as indicated	Check	Holganix
Est. N release	120 lbs/acre	142 lbs/acre
P	32	83
K	200	306
S	12	15
Ca	2190	2932
Mg	254	313
Organic matter	3.8%	4.9%
CEC	15.2	20.2

FUNGI AND ROOTS FIGHT COMPACTION

Measurements on 44 different farms across Iowa, 5,400 acres

One application of Bio 800+ Revive at planting



Water infiltration percent improvement over check

Crop	May 15	June 20	July 10
Corn	16%	41%	64%
Beans	3%	15%	53%

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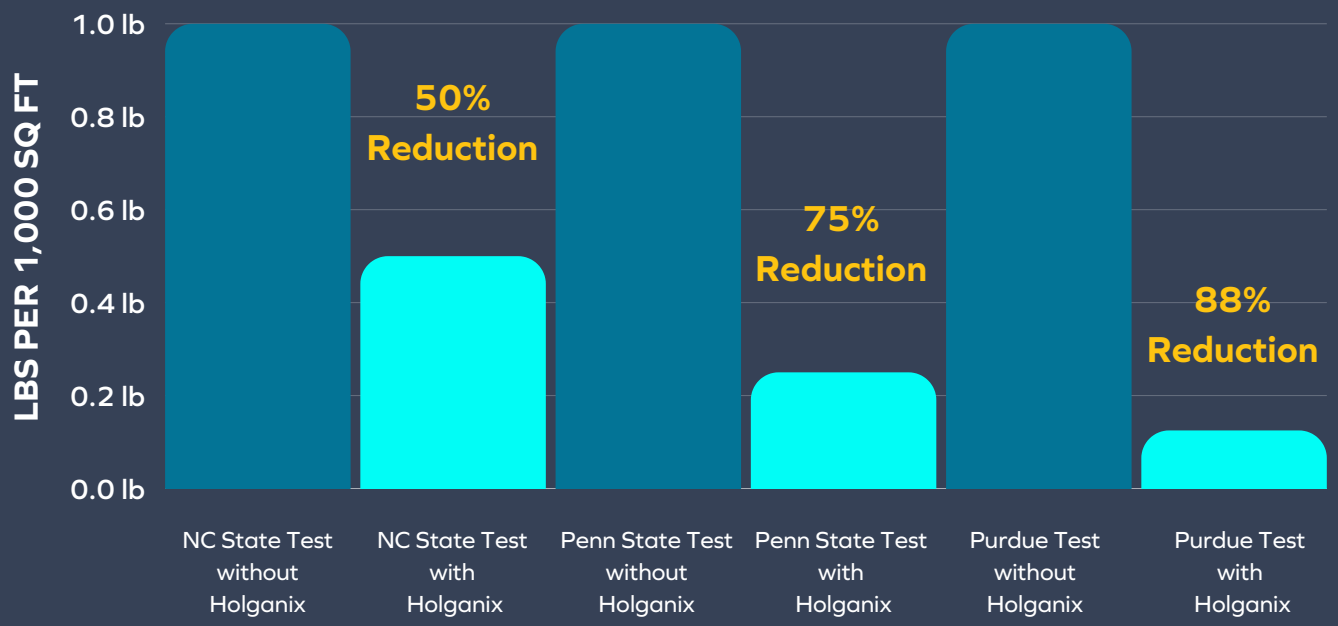
REDUCING FERTILIZER RATES IN TURF

University Studies

Pounds of Nitrogen per 1,000 sq ft

Fertility Needed for Optimum Color and Vigor



Types of Nitrogen

NC State: Methylene Urea (slow release)

Penn State: Standard Urea

Purdue: Methylene Urea (slow release)

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REDUCING FERTILIZER WITH BIO 800+ INCREASES TOTAL AVAILABLE NUTRIENTS

Soil Samples
Southeast Iowa (June 2, 2025)

Nutrient	No Fert. Nutrients, lbs/acre	Full Fert. Nutrients, lbs/acre	No Fert. Fertilizer equivalent, lbs of fertilizer	Full Fert. Fertilizer equivalent, lbs of fertilizer	Reference fertilizer
Carbon	49,680	26,400	82,800	44,000	60% C
Nitrogen	4,944	3,168	10,748	6,887	46-0-0
Phosphorus	1,200	696	5,286	3,066	11-52-0 @ 22.7% P
Potassium	3,288	2,616	6,377	5,070	0-0-60 @ 51.6% K
Sulfur	504	288	2,100	1,200	AMS 24% S
pH	6.2	5.4			
Organic matter	4.0	2.6			
Yield	245	228		7/8 (88%)	3.8%

Full fertilizer per acre – 140 lbs. 12-40-0-10, 84 lbs 0-0-62, 12 lbs. S



Ready to learn more?

Want to dig in deeper? Below are additional tools to learn more about what Holganix Bio 800+ technology can do for your farm.

Product Performance Book

Access testimonials and unsolicited data from commercial growers just like you.

Commercial Video

Watch our 25-minute video commercial featuring Holganix CRO, Bryan Hansel.

Let's Chat - Need to chat with a Holganix specialist?

Call us: 866-563-2784