



horganix

Product Performance Book

www.horganix.com

866-563-2784

Holganix and the American farmer are revolutionizing the way the world grows, restoring life to the soil to ensure Thrivability for all.

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Bio 800+

REVIVE

Soil Health. Yield. Sustainability.

Holganix Bio 800+ Revive harnesses the power of over 800 species of soil microbes to increase the farm's profit per acre by improving yield, reducing fertilizer, and enhancing soil health.

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

- Increase profit per acre through yield improvements and reduced fertilizer
- Improve soil health
- Nurture faster establishment
- Boost roots; contributing to soil organic matter and carbon
- Stronger plants are better able to withstand drought, wind, and hail
- Accelerate residue break down
- Restore needed beneficial soil microbes depleted by tillage, freezing, flooding, fungicides, and other stressors



Scan here to learn more about Bio 800+ Revive.

Bio 800+

THRIVE 2-0-0

Breakdown Crop Residue. Enhance Fertilizer Investment.

Holganix Bio 800+ Thrive charges soil with a consortium of over 800 species of soil microbes, nitrogen, and microbe food. Bio 800+ Thrive is enriched for those fungal species that are particularly efficient at degrading crop residue.

What can you expect from Holganix Bio 800+ Thrive?

- Enhances planter performance
- Breaks down crop residue
- Builds soil health
- Improves seed emergence
- Releases locked nutrients
- Improves emergence and stand establishment with any cover crop planted through residue



Scan here to learn more about Bio 800+ Thrive.

Corn

REVIVE**Rate Recommendation:**

0.5 gal per acre at planting

Typical Yield Increase:

6 - 11 bu/acre

Total Foliar Spray Volume:

Use a minimum of 10–15 gallons per acre. Higher spray volumes provide more uniform coverage and more consistent results.

Key Benefits:

- Increased root mass
- Thicker stalks, stronger brace roots
- Larger ears with better fill
- Reduced fertilizer

Several years of independent third-party research and grower data have been compiled on Holganix Bio 800+ Revive for corn. The photos and testimonials shown are just a sample. For additional information, please visit: www.Holganix.com/farmer





NORTH DAKOTA

The farmer planted this corn in 42°F soil. This picture was taken on April 30, 2021.

Holganix Bio 800+ Revive Treatment:

Rate: 0.5 gal per acre

App Timing: At planting

App Method: In-furrow

Other Products Used: Fertilizer 16-34-0

“Everyone said I was crazy for planting in cold dirt seven days ago. But I’ve already got a sprout. I said, when you have good seed, a solid treatment, and Holganix on it, no worries.”



SOUTHERN MINNESOTA

The corn above was planted on May 5, 2022, and the grower took this picture on May 19, 2022. All Holganix Bio 800+ Revive-treated corn had emerged, while the corn on the left represents the tallest check in the field.

Holganix Bio 800+ Revive Treatment:

Rate: 0.5 gal per acre

App Timing: At planting

App Method: In-furrow

Other Products Used: Starter fertilizer



INDIANA

Holganix Bio 800+ Revive Treatment:

Rate: 0.5 gal per acre

App Timing: At planting

App Method: In-furrow

Other Products Used: Starter fertilizer. All other inputs were replicated in the control.



SOUTHWEST KANSAS

This picture was taken on June 22, 2022. On top photo, the corn is drought stressed and the leaves are rolling in the control. On the bottom photo, Holganix Bio 800+ corn leaves are darker green in color and the corn leaves are not rolling due to less drought stress.

“These are our low-water irrigation before-and-after results. It has been 100°F for the past two weeks, with brutal winds. To survive the weather out here on the Great Plains, it’s essential to choose the right hybrids and improve drought tolerance by balancing the soil with a product like Holganix Bio 800+ Revive.”



NORTH DAKOTA

This picture was taken on August 12, 2021. The grower observed that the Holganix Bio 800+ Revive-treated corn has more kernels and is better filled to the tip compared to the control.
Note: This was a very dry season for this farm.

Holganix Bio 800+ Revive Treatment:

Rate: 0.5 gal per acre

App Timing: At planting

App Method: In-furrow

Other Products Used: Fertilizer 16-34-0



SOUTHERN MINNESOTA

This picture was taken on May 20, 2022. The grower noticed the formation of nodal roots just seven days after planting his corn.

Holganix Bio 800+ Revive Treatment:

Rate: 0.5 gal per acre

App Timing: At planting

App Method: In-furrow

Other Products Used: 2 gal of 6-24-6 starter fertilizer



Bio 800+

REVIVE

NORTHWEST MISSOURI

What happens after five applications of Holganix Bio 800+?

“Healthier soil structure, lower penetrometer readings, reduced soil compaction, and stronger root zones all start with feeding the soil biology first.”



SOUTHEAST IOWA

This picture was taken on August 8, 2022. The grower estimated a 32-bu difference compared to the control. This estimate was based on counting kernels and provides a rough approximation only.

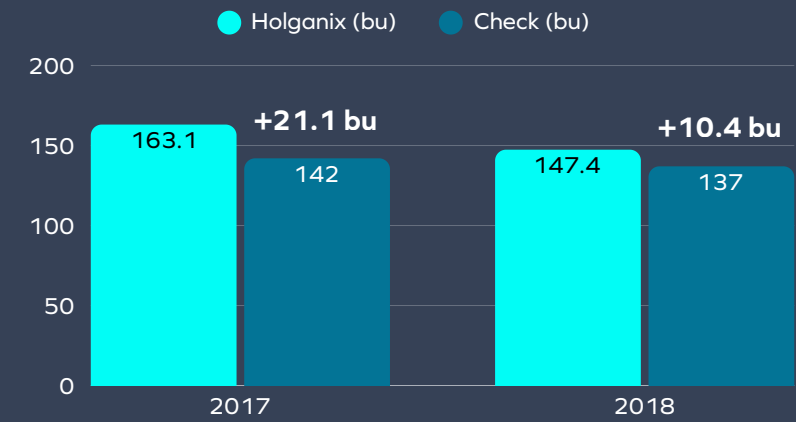
Holganix Bio 800+ Treatment:
Rate: 0.5 gal per acre
App Timing: After emergence
App Method: Foliar
Note: This was a true side-by-side comparison.

CORN YIELD DATA

Replicated Plot Data, Western MO, 2018

Replicated plots, with 4 rows per rep. Rows were 500' long. The land was not 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.



"Best looking corn plot on the farm!"
 -Researcher



Missouri corn harvest is in full swing— 400 bushels and counting! Holganix Bio 800 at work— boosting crop yields!

"Better root structure.
 Stronger stalk development.
 Higher nutrient uptake."



Holganix put

Corn

THRIVE

Rate Recommendation:

0.5 gal per acre, post-harvest

Total Foliar Spray Volume:

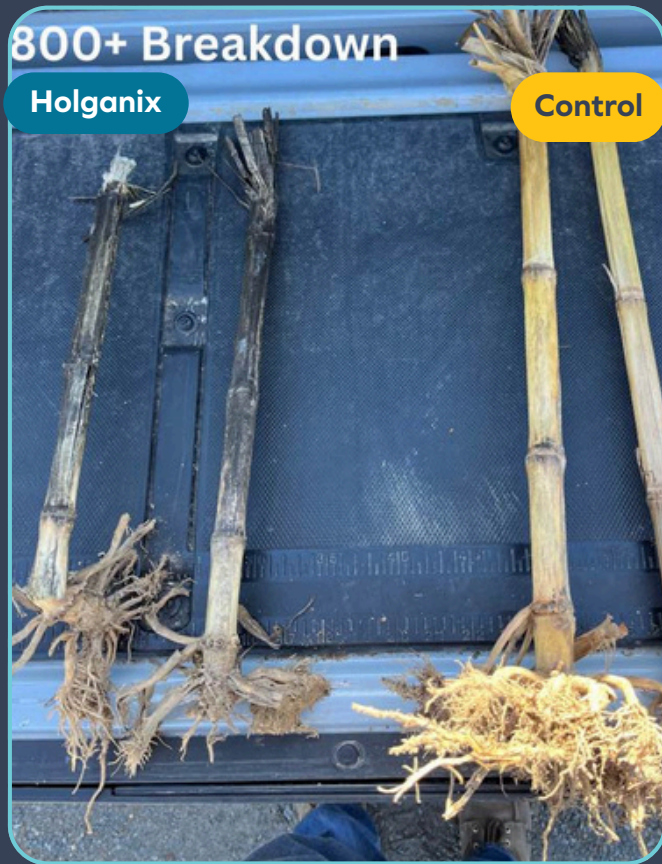
Use a minimum of 10–15 gallons per acre. Higher spray volumes provide more uniform coverage and more consistent results.

Key Benefits:

- Enhance planter performance
- Break down crop residue
- Improve seed emergence
- Cycle & release nutrients
- Build soil health

Several years of university and grower data have been compiled on Holganix Bio 800+ Thrive for corn. The photos and testimonials shown are just a sample. For additional information, please visit: www.Holganix.com/farmer





TENNESSEE

The grower captured this photo in October 2023, highlighting a notable difference in fungal growth and stalk degradation between the Holganix Bio 800+ Thrive-treated and untreated corn.



Holganix



Holganix



Holganix



Control

KENTON, TENNESSEE

These pictures were taken by the grower on November 2, 2023. Holganix Bio 800+ Thrive was applied post-harvest at 0.5 gal/acre. The grower noted that you can clearly see the fungi (white webbing) beginning to break down the roots and convert them into organic matter.



Control



Holganix

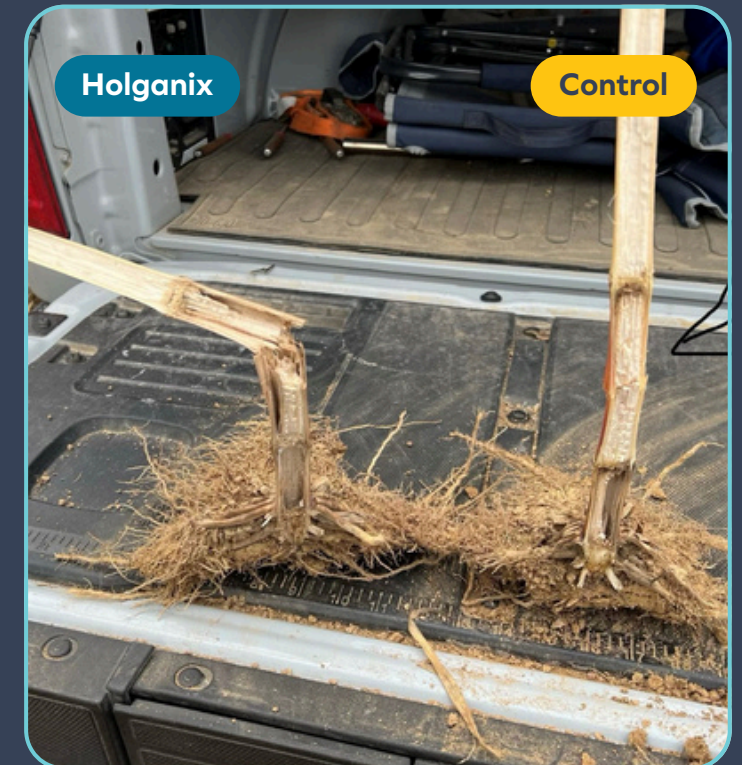
CORN RESIDUE, SOUTHEAST IOWA

The grower took these pictures on November 10, 2022. All fields were vertically tilled, and Holganix Bio 800+ Thrive had been applied three weeks earlier. Note: Conditions in Iowa were favorable—warm and moist.



Holganix

Control



Holganix

Control

TENNESSEE

This picture was taken by the grower on October 16, 2023. Holganix Bio 800+ Thrive was applied post-harvest at 0.5 gal/acre. The grower stated, "The Bio 800+ Thrive-treated stalk is already hollow in the first internode, and fungi are growing within it. The second internode is much further along than the control."

TENNESSEE

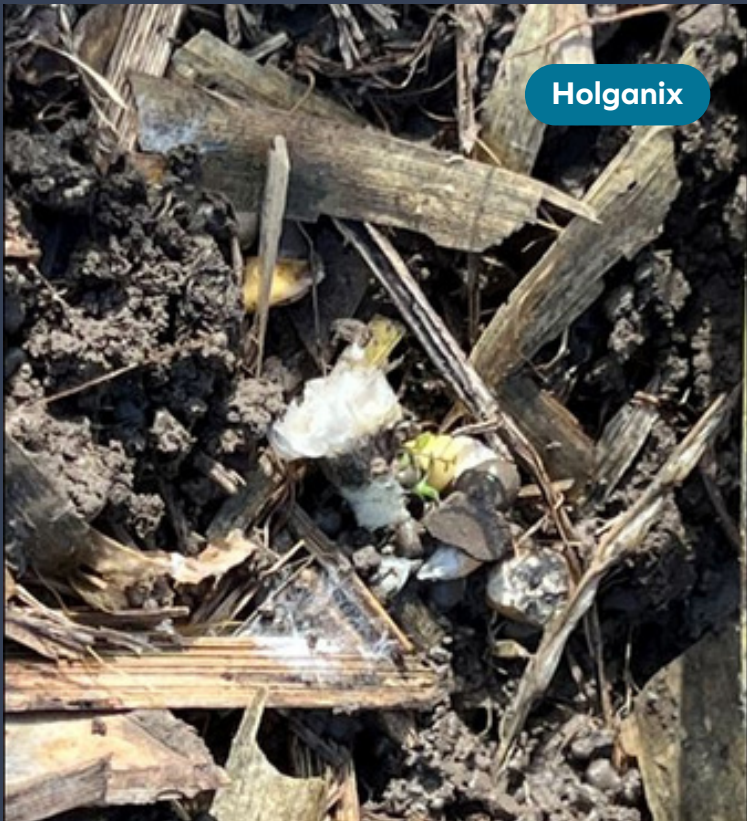
The grower took this photo on October 16, 2023. "The Bio 800+ Thrive-treated stalk just breaks over, while the untreated stalk simply bends," he said.



SOUTHEAST IOWA

These pictures are from the same crop and grower featured on the previous page. The grower observed remarkable residue degradation.

According to the grower: "I saw a noticeable difference in every field. You could touch the stubble and feel it fall apart more easily. This will fundamentally change the way I farm and reduce tillage, fuel, labor, and tractor wear."



SOUTHEAST IOWA

This picture was taken 10 days following a Holganix Bio 800+ Thrive application.



CORN RESIDUE, SOUTHEAST IOWA

These pictures are from the same crop and grower featured on the previous page. The grower observed remarkable residue degradation.

According to the grower:

"I saw a noticeable difference in every field. You could touch the stubble and feel it fall apart more easily. This will fundamentally change the way I farm and reduce tillage, fuel, labor, and tractor wear."

Soybeans

REVIVE

Rate Recommendation:

0.5 gal per acre at planting

Typical Yield Increase:

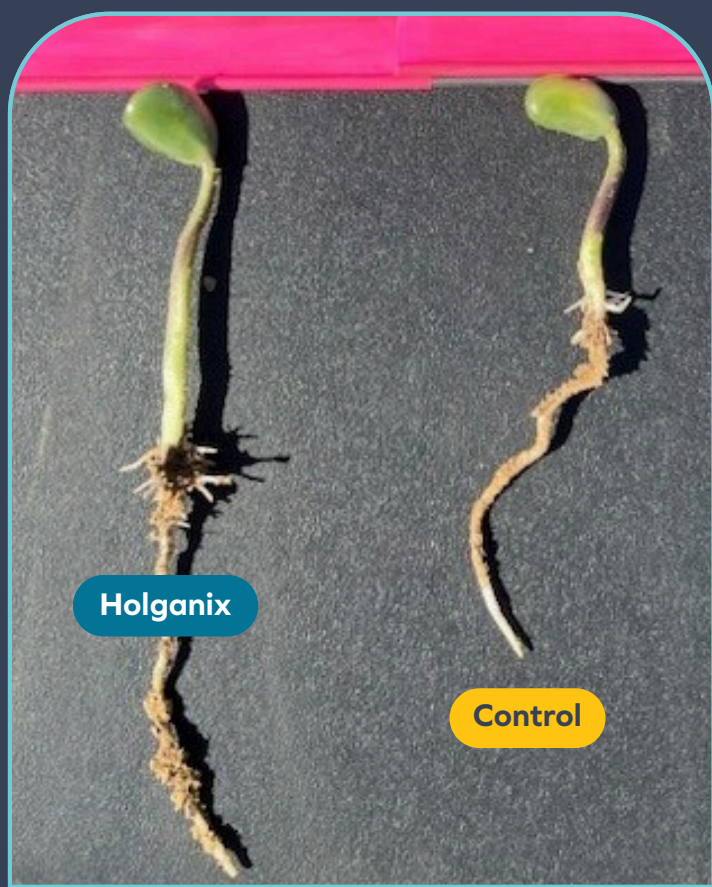
2-6 bu/acre

Key Benefits:

- Stronger stems
- Better roots and nodulation
- Improved pod set

Several years of university and grower data have been compiled on Holganix Bio 800+ Revive for soybeans. The photos and testimonials shown are just a sample. For additional information, please visit: www.Holganix.com/farmer





TENNESSEE

These soybeans were planted on March 30, 2023. This picture was taken on April 10, 2023.

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

“The Holganix-treated beans are emerging much more uniformly. I’d estimate there are 10–12 thousand more plants up right now”



CENTRAL ILLINOIS

“Holganix Bio 800+ Revive soybeans have more nodules and a larger root system.”

These soybeans were planted on June 15, 2019, following hail damage to an earlier crop.

Holganix Bio 800+ Revive Treatment:
Rate: 0.5 gal per acre
App Timing: 5 days after planting
App Method: Foliar

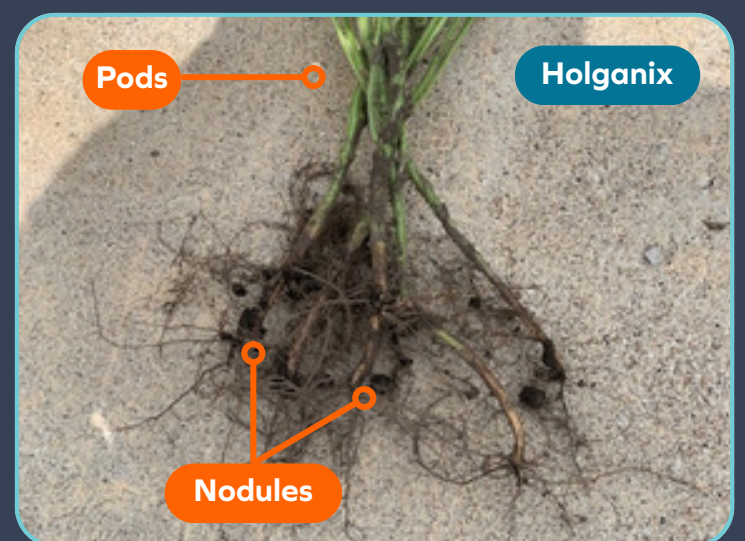
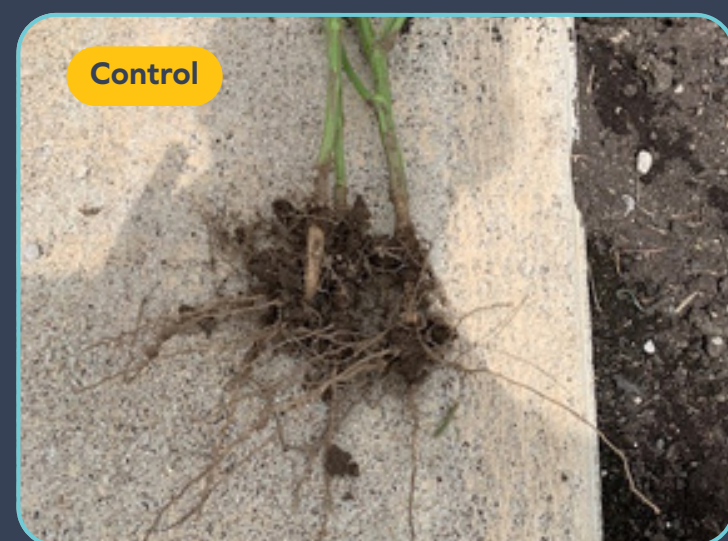


CENTRAL ILLINOIS

The grower took this picture on June 7, 2023. According to the grower, the Holganix-treated beans (right side of the picture) are larger, greener, and have much stronger roots than the control.

Note: This field is high in soybean cyst nematode pressure and Holganix Bio800+ contains fungal microbes (Trichoderma) which suppress this pest.

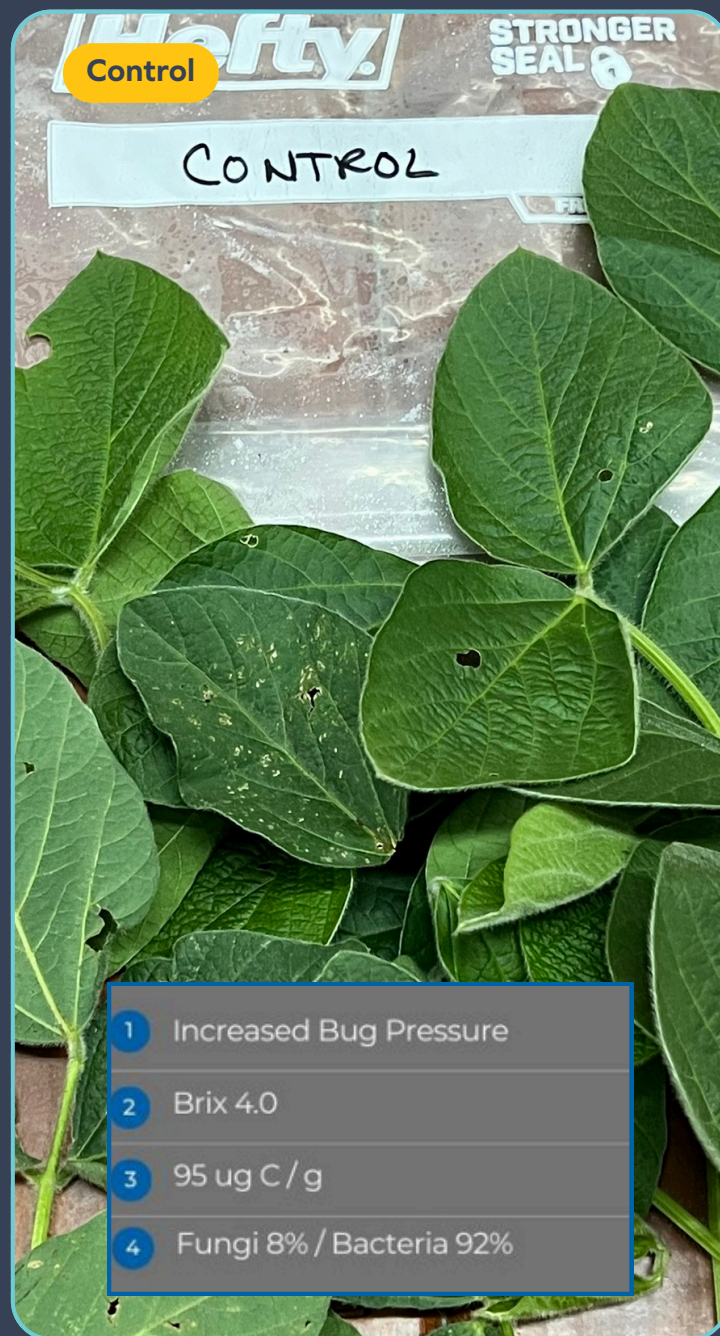
Holganix Bio 800+ Revive Treatment:
Rate: 0.5 gal per acre



WESTERN MISSOURI

Organic soybeans treated with Holganix Bio 800+ Revive show improved root and nodule development, as well as earlier pod formation.

Holganix Bio 800+ Revive Treatment:
Rate: 0.5 gal per acre



SOUTHEAST IOWA

The grower took these pictures on July 5, 2023. The soybeans pictured on the right were treated with Holganix Bio 800+ Revive at a rate of 0.5 gal per acre, while the soybeans on the left are the control.

Note: This field is in year 2 of Bio 800+ Revive applications.

“The Bio 800+ Revive-treated field had reduced bug pressure, elevated Brix count, double the microbial biomass carbon, and an improved fungi-to-bacteria ratio.”



CENTRAL INDIANA

According to the grower, the untreated roots came up with little to no soil attached, while the treated roots were much more extensive and pulled up a significant amount of soil. He observed a +4 bu/acre soybean yield increase over the control.

Holganix Bio 800+ Revive Treatment:

Rate: 0.5 gal per acre

App Timing: At planting, 2 weeks after emergence

App Method: Foliar

Other Products Used: 10 gal of water

SOYBEAN YIELD DATA

Third Party Research Farm Data, Western, MO

Conditions: Replicated plots with four rows per replicate, each row 500 ft long. The land was non-irrigated. In 2018, the area received minimal rainfall and experienced significant stress.

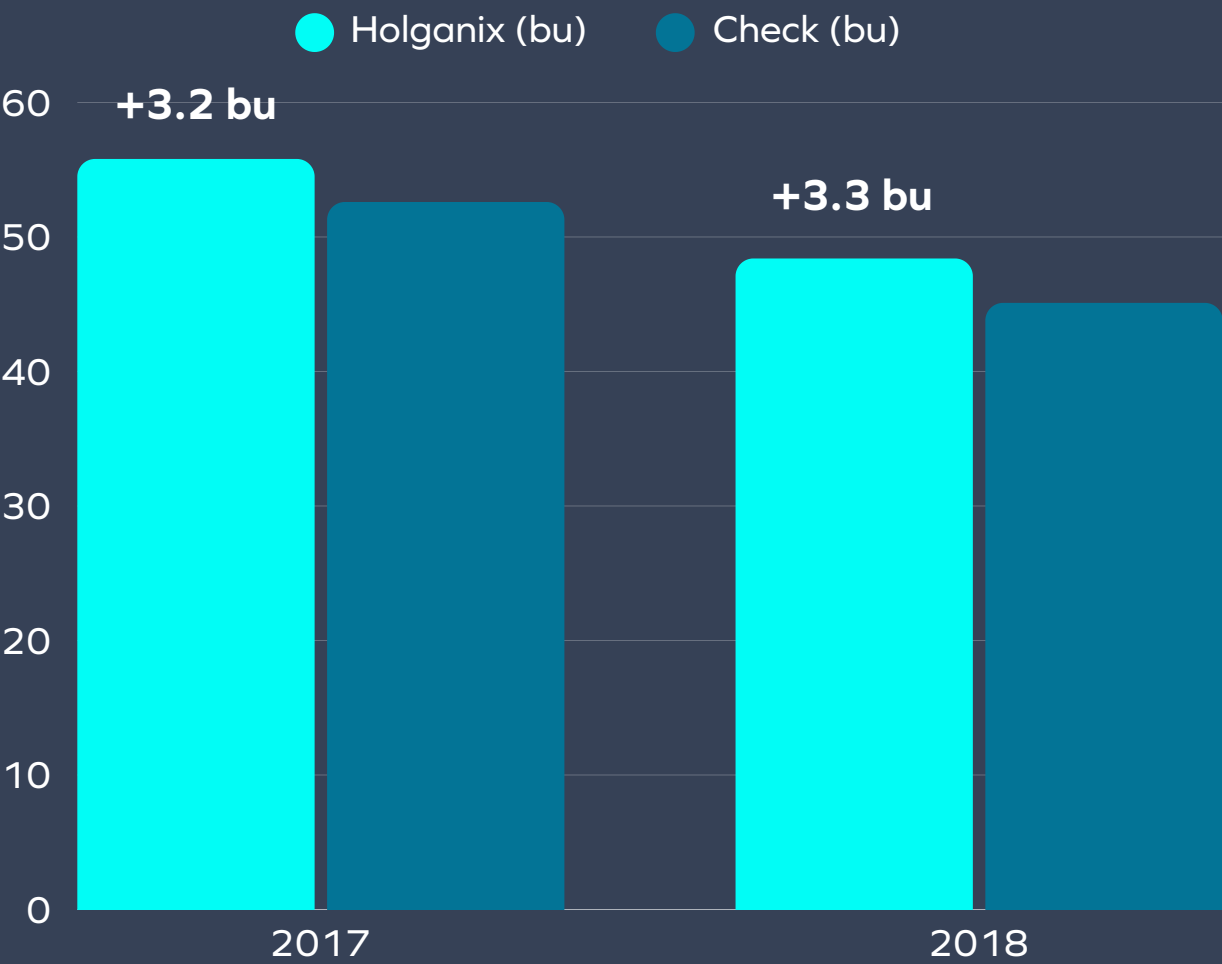
Holganix Bio 800+ Treatment:

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.



Soybeans

THRIVE**Rate Recommendation:**

0.5 gal per acre, post-harvest

Total Foliar Spray Volume:

Use a minimum of 10-15 gallons per acre. Higher spray volumes provide more uniform coverage and more consistent results.

Key Benefits:

- Enhance planter performance
- Break down crop residue
- Improve seed emergence
- Cycle & release nutrients
- Build soil health

Several years of university and grower data have been compiled on Holganix Bio 800+ Thrive for corn. The photos and testimonials shown are just a sample. For additional information, please visit: www.Holganix.com/farmer





Before



After

CENTRAL OHIO

This grower used Holganix Bio 800+ with a burn-down herbicide to accelerate debris breakdown and improve crop germination and establishment.

Holganix Bio 800+ Thrive Treatment:

Rate: 0.5 gal per acre

App Timing: Pre-emergence

App Method: Foliar

Other Products Used: Roundup Authority XL, Crop Oil, and Detonate herbicide



WESTERN KENTUCKY

These pictures were taken on August 2, 2023, from a field in western Kentucky planted with double-crop soybeans following wheat. Holganix Bio 800+ Thrive was applied at 0.5 gal/acre during the grower's burndown pass.

The roots responded to the application, appearing longer, deeper, and showing more nodulation. Overall, the treated area had a better stand. The farmer observed a noticeable improvement in the overall health of the plants.

“We noticed fungi beginning to grow on and under the straw in the treated area, which is what we expected to happen,”

GROWER
WESTERN KENTUCKY

Wheat

REVIVE

Rate Recommendation:

0.5 gal per acre at planting

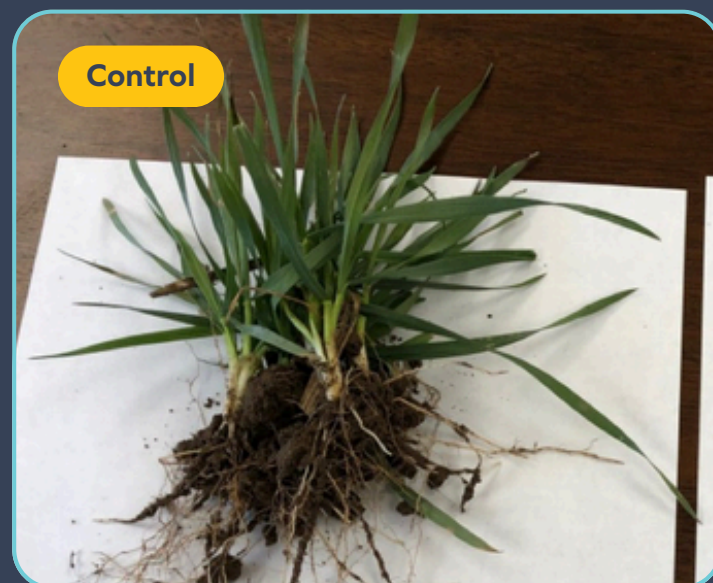
For winter, a spring foliar application can be made if a fall application isn't practical.

Key Benefits:

- Increased root mass, better crown roots, more tillers
- More seed rows per head

Several years of university and grower data have been compiled on Holganix Bio 800+ Revive for wheat. The photos and testimonials shown are just a sample. For additional information, please visit: www.Holganix.com/farmer





WINTER WHEAT, KANSAS

The Holganix Bio 800+ Revive-treated crop developed thicker, deeper roots with darker, green leaves than the control, including the crown roots. The grower observed a +12 to +18 bu/acre yield advantage.

Holganix Bio 800+ Revive Treatment:

Rate: 0.5 gal per acre in 15 gal of water

App Timing: 5 days after planting

App Method: Foliar



WINTER WHEAT, KANSAS

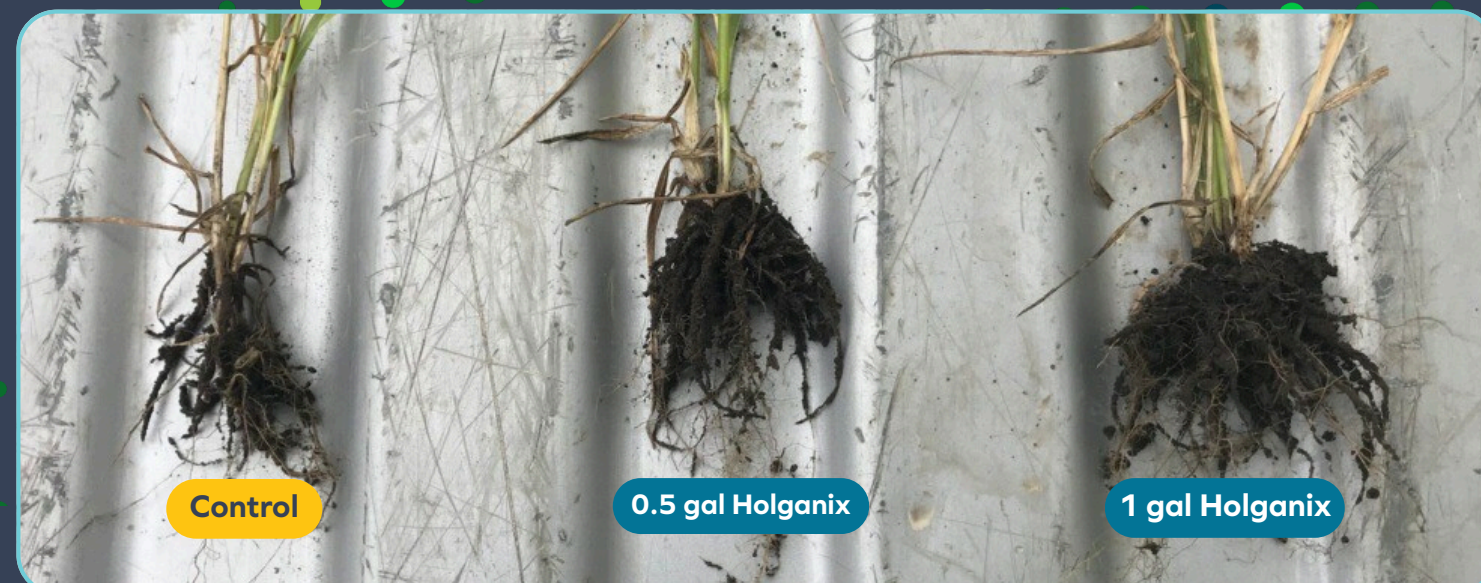
This is the same grower and location as the previous picture. This photo was taken in the spring of 2019. The Holganix Bio 800+ Revive-treated crop is 43 inches tall with 17 rows of seed, compared to the control at 39 inches tall with 13 rows of seed.

Holganix Bio 800+ Revive Treatment:

Rate: 0.5 gal per acre in 15 gal of water

App Timing: 5 days after planting

App Method: Foliar



WINTER WHEAT, KANSAS

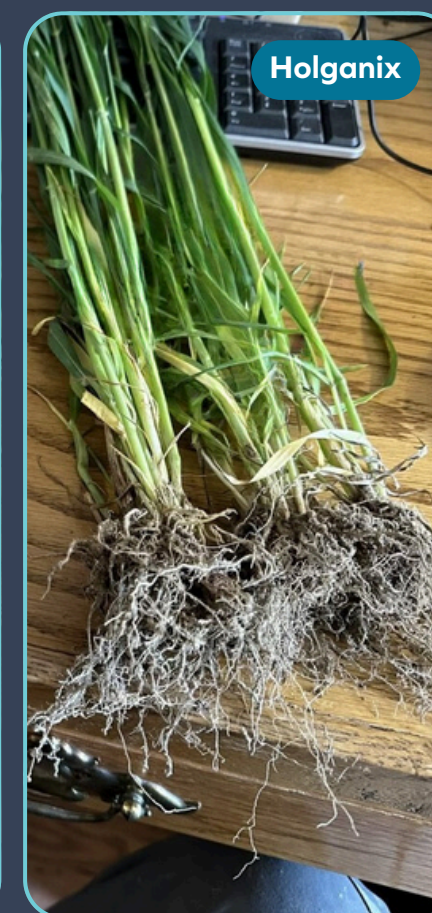
This picture of organic winter wheat was taken on May 12, 2020. Holganix Bio 800+ Revive was applied once, in the spring.

Holganix Bio 800+ Revive Treatment:

Rate: As shown in picture

App Timing: Spring application

App Method: Foliar



WINTER WHEAT, KANSAS

This winter wheat photo was taken on May 9, 2023. He treated 30 ft along the edge with Holganix, and you can almost see a clear line between the sprayed and unsprayed areas.

Holganix Bio 800+ Revive Treatment:

Rate: 0.5 gal per acre

App Timing: Spring application

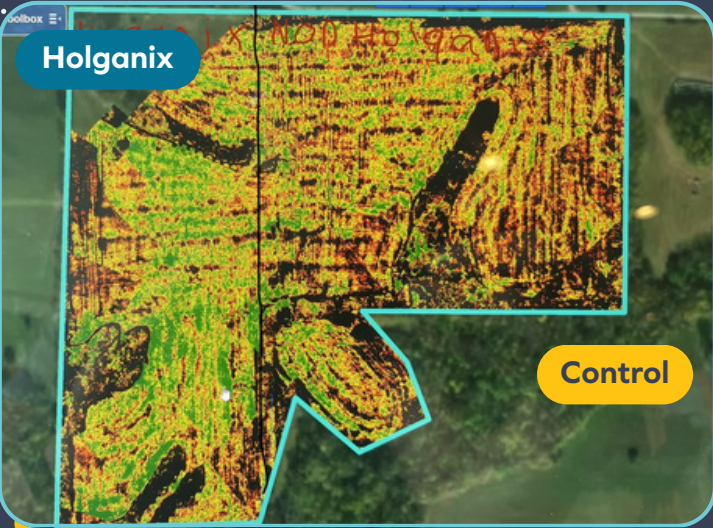
App Method: Foliar

“Met with the neighbor this morning to dig up some wheat. The pictures of the roots don’t do it justice—there’s a huge difference between the two”



WINTER WHEAT, ONTARIO, CANADA

This photo was taken on December 30, 2023.
Holganix Bio 800+ Revive was applied earlier that October.



WHEAT YIELD DATA
Northwest, MO, 2022

The wheat shown was planted on November 16, 2021. This drone NDVI image was captured on May 19, 2022. The grower applied Holganix Bio 800+ foliar on April 19, 2022. The image demonstrates that the Holganix Bio 800+, which was used on the left portion of the field, is greener and healthier than the control (deeper Red color) on the right, which has poorer plant health.

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

THIRD PARTY RESEARCH

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

- Eight locations were treated with Holganix Bio 800+ at 0.5 gal/acre at planting in the fall, achieving 88% wins over the control.
- Twenty-four locations received spring applications at 0.5 gal/acre when the crop began growing again, achieving 79% wins.
- Five locations received both fall and spring applications, achieving 100% wins.

For many major AgTech companies, a product is considered commercially viable if the win percentage meets or exceeds 70%. A 79% win is viewed as strong, while 88% or 100% is considered exceptional.

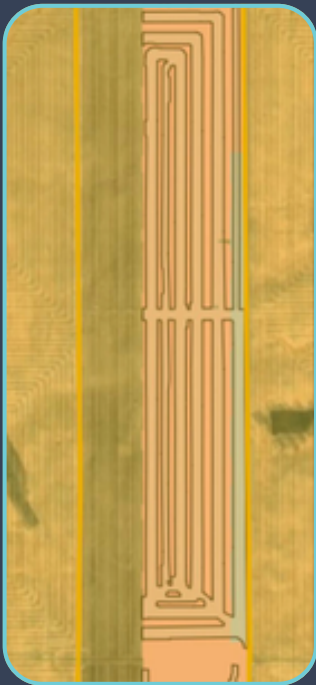
Application	Spring Only		Fall Only		Fall & Spring	
Holganix Cohort	Yield % +/- Control	Win/Total Trials	Fall Only Yield % +/- Control	Win/Total Trials	Yield % +/- Control	Win/Total Trials
1	10%	4/5	4%	2/2	2%	1/1
2	11%	5/5	1%	1/1		
3	-7%	3/5	1%	1/1	1%	1/1
4	8%	1/1	8%	1/1	8%	1/1
5	2%	4/6	11%	2/2	3%	1/1
6	32%	1/1				
7	2%	1/1	2%	1/1	2%	1/1
Weighted Average	4.20%	19/24 (79%)	5.80%	8/8 (100%)	3.80%	5/5 (100%)

DURUM WHEAT YIELD DATA

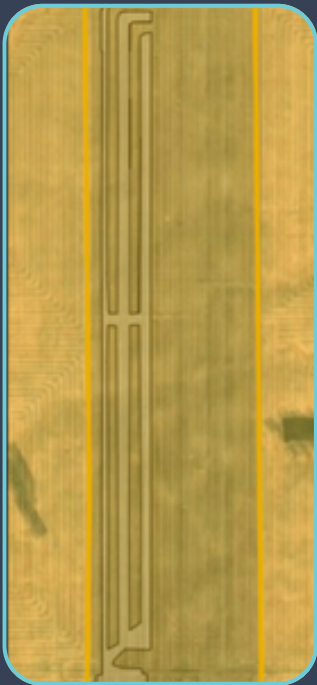
Third Party Research Trial, MT, 2020

The data below comes from two different fields, with the treated and check plots positioned adjacent to each other. Holganix Bio 800+ Revive was applied at a rate of 0.5 gal per acre as a spring application.

Note: Bushel price used for calculations is \$6 per bushel.



Sprayed



Not Sprayed



Sprayed



Not Sprayed

	Yield bu/acre	Return/acre*	Total acres
Holganix	47.29	\$283.72	58.72
Check	42.42	\$254.51	31.5
Holganix benefit	4.7	\$29.21	
Holganix	51.07	\$306.39	57.2
Check	46.69	\$280.15	19.96
Holganix benefit	4.38	\$26.24	



Cotton

REVIVE

Rate Recommendation:

0.5 gal per acre at planting

Key Benefits:

- Faster germination
- Better boll retention
- More extensive roots
- Higher yield

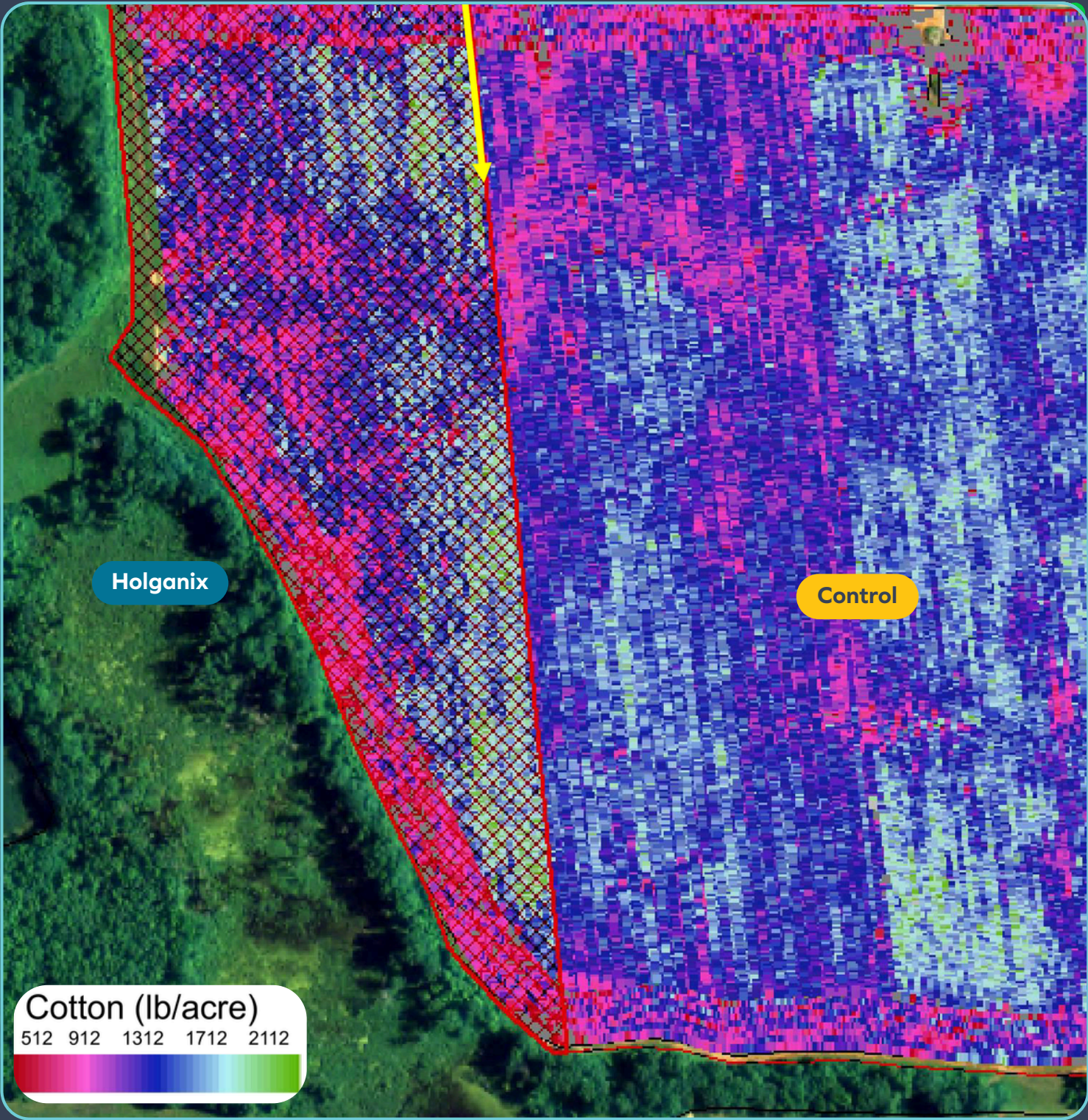
Several years of university and grower data have been compiled on Holganix Bio 800+ Revive for cotton. The photos and testimonials shown are just a sample. For additional information, please visit: www.Holganix.com/farmer



COTTON YIELD DATA
Third Party Research Trials, NC 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

Cotton yield data shows a 29 lb/acre increase in lint/acre.



COTTON YIELD DATA
Third Party Research Trial, AL, 2017

Yield Map Legend: Yellow/White = Higher Yield | Blue = Lower Yield

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.



COTTON, SOUTHEAST MISSOURI

These pictures were taken on July 14, 2022. The cotton pictured on the right was treated with Holganix Bio 800+ Revive at 0.5 gal/acre. Holganix Bio 800+ had taller, darker, bigger, greener leaves and shoots with more robust roots than the control.

Note: Both the treated and control groups were non-irrigated.

COTTON, MIDSOUTH

This photo was taken on June 28, 2024. Holganix Bio 800+ has taller greener cotton plants and thicker, longer roots than the control.

Holganix Bio 800+ Revive Treatment:
Rate: 0.5 gal per acre



COTTON, MIDSOUTH

This photo was taken on July 29, 2024. Holganix Bio 800+ has taller and greener cotton plants than the control.

"We are seeing big results in our Holganix Bio 800+ treated cotton in the Midsouth."



Control

Holganix



Control

Holganix



Control

Holganix



Control

Holganix

Hay & Pasture

REVIVE**Rate Recommendation:**

0.5 gal per acre at planting.

Total Foliar Spray Volume:

Use a minimum of 10–15 gallons per acre. Higher spray volumes provide more uniform coverage and more consistent results.

When to Apply: Use Holganix Bio 800+ after each cutting when plants regrow to 4-5 inches tall.

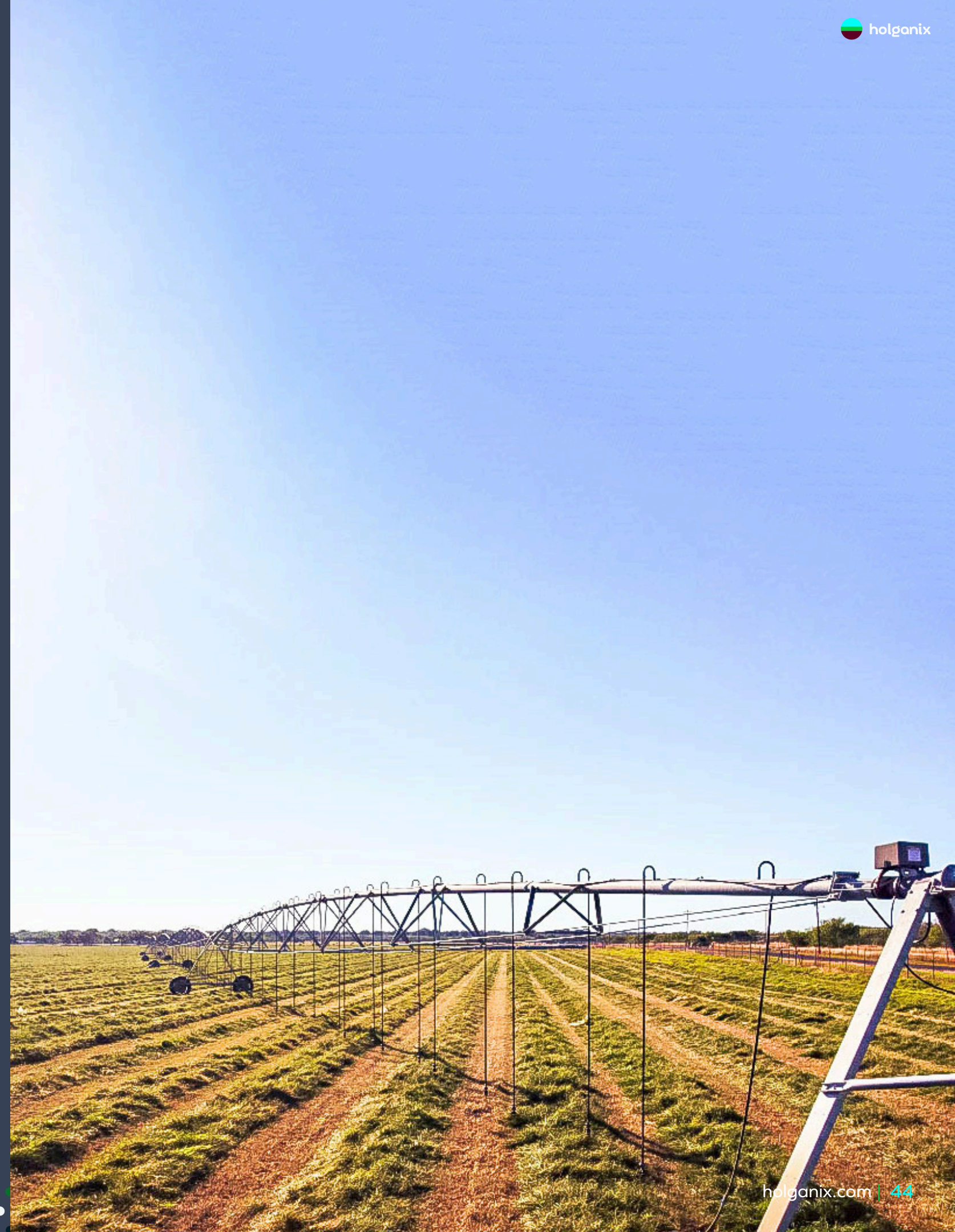
Key Benefits (Hay):

- Faster germination and stand establishment at planting
- Quicker recovery after cutting
- Reduced disease pressure
- More consistent yields throughout the growing season with less yield decline over successive cuttings

Key Benefits (Pasture):

- Faster regrowth and recovery after grazing rotations
- Accelerated manure breakdown
- Quicker nutrient cycling and return of nutrients to the soil
- Improved nutrient availability to support continued forage growth

Several years of university and grower data have been compiled on Holganix Bio 800+ Revive for hay & pasture. The photos and testimonials shown are just a sample. For additional information, please visit: www.Holganix.com/farmer





PASTURE, ALABAMA

All four photos were taken in the same field. The top two show a fescue mix planted with no fertilizer or weed control, while the bottom two show the same fescue mix with two applications of Holganix Bio 800+ Revive. Holganix Bio 800+ Pasture is 18-19 inches tall and darker green compared to the control which is 2-3 inches tall, poor growing pasture with mostly brown stems and a few small green leaves.



PASTURE, NEBRASKA

A grower in Nebraska captured these before-and-after pictures of his pasture field. He applied Holganix Bio 800+ Revive at 0.5 gal/acre, mixed with 15 gallons of water.

"Not only does Bio 800+ improve soil health and your crops, but it also improves profitability"

JOY GRAFF
HONDO, TEXAS

Berries

REVIVE**Rate Recommendation:**

1.5 gal/acre when the buds begin to break, and another gallon 4 weeks later. Varies depending on crop

Key Benefits:

- Higher yield
- More extensive roots
- Higher brix
- Stronger plants

Several years of university and grower data have been compiled on Holganix Bio 800+ Revive for berries. The photos and testimonials shown are just a sample. For additional information, please visit: www.Holganix.com/farmer





WINE, MASSACHUSETTS

Alfalfa Farm Winery reports an average 55% yield increase in their Sevyal Blanc, Leon Millot, and Marechal Foch grapes. Additionally, their Brix* index rose by an average of 26% compared to the control.

Note: *Higher Brix is an indication of a healthier plant and a higher sugar content

Holganix Bio 800+ Tree & Shrub Treatment:
Rate: 0.5 gal per acre
App Timing: Weekly from greening to harvest
App Method: Mister sprayed to runoff
Other Products Used: Insecticides

“We’re very excited to see how
Holganix continues to enhance the
health of our grapes.”



BLACKBERRIES, NORTH CAROLINA

These pictures were taken by the grower on August 10, 2022.

The blackberries in the right picture were treated through drip irrigation with 1.5 gallons per acre of Holganix Bio 800+ Tree & Shrub in April, followed by 1 gallon per acre applications in May, June, and July. The left picture shows the untreated control.



BLACKBERRIES, NORTH CAROLINA

These pictures are from the same crop and grower featured on the previous page. According to the grower, the blackberry bushes treated with Holganix Bio 800+ Tree & Shrub appear much healthier than the control, with fewer leaf issues and lower disease pressure.

Across four pickings, spaced a week apart, the Holganix-treated berries were 21% heavier and had an 11% higher Brix.

STRAWBERRIES RESEARCH GROWER DATA

California, 2017

In Ventura County, California, a researcher applied Holganix Bio 800+ Revive to a commercial strawberry field.

The result: a \$3,000 per acre higher yield and an earlier harvest compared to neighboring growers.

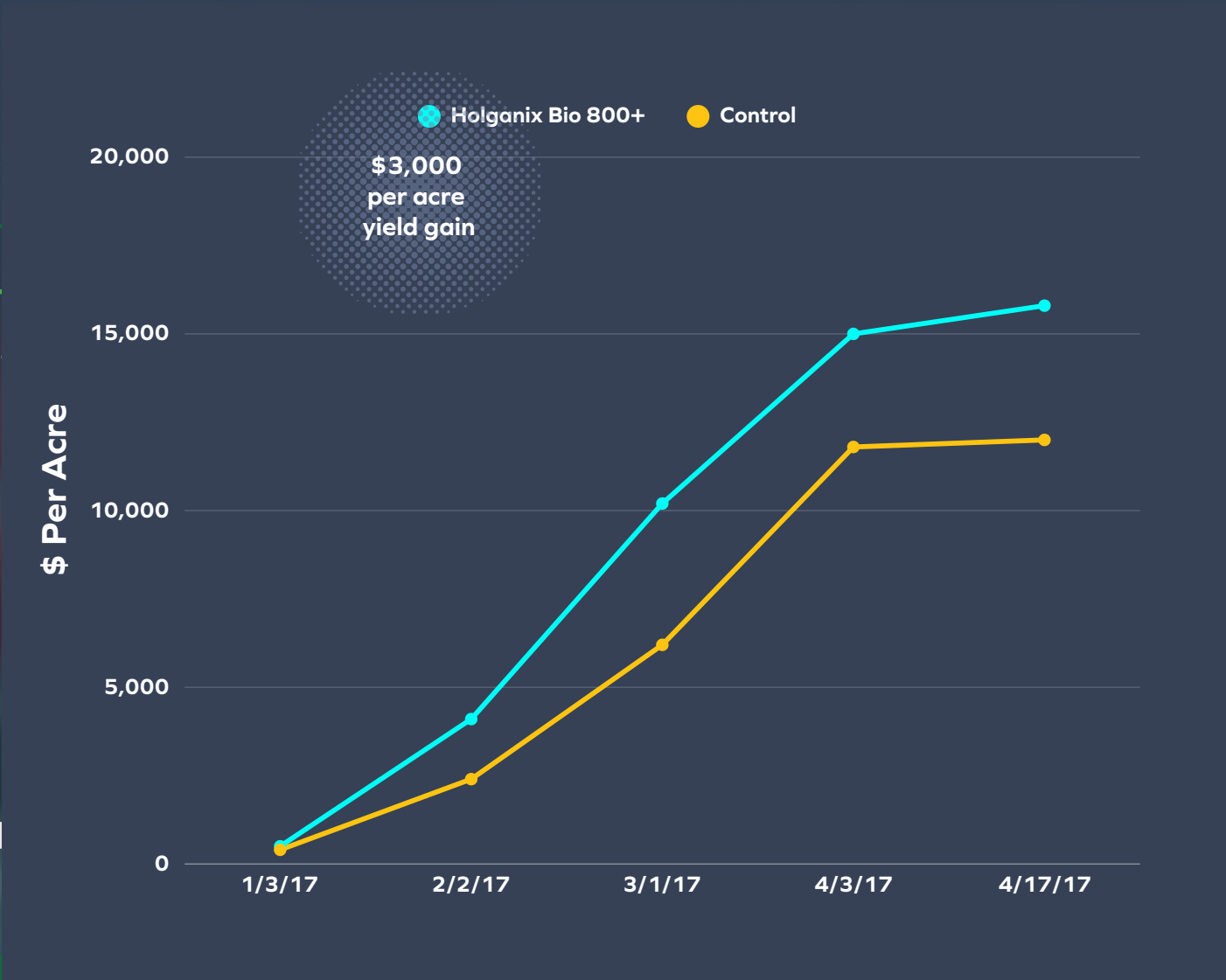
Holganix Bio 800+ Revive Treatment:

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



BLUEBERRY YIELD AND BRIX DATA: THIRD PARTY RESEARCH FARM

Michigan, 2021

In Ventura County, California, a researcher applied Holganix Bio 800+ Revive to a commercial strawberry field.

The result: a \$3,000 per acre higher yield and an earlier harvest compared to neighboring growers.

Holganix Bio 800+ Revive 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

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.

BLACKBERRY YIELD DATA

North Carolina, 2022

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

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



INCREASED BRIX INDEX: MULTIPLE FARMS

Multiple Farms, Northeast U.S.

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

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

GRAPES RESEARCH GROWER DATA

Massachusetts, 2013-2015

Average yields more than doubled since using Holganix Bio 800+ Tree & Shrub

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

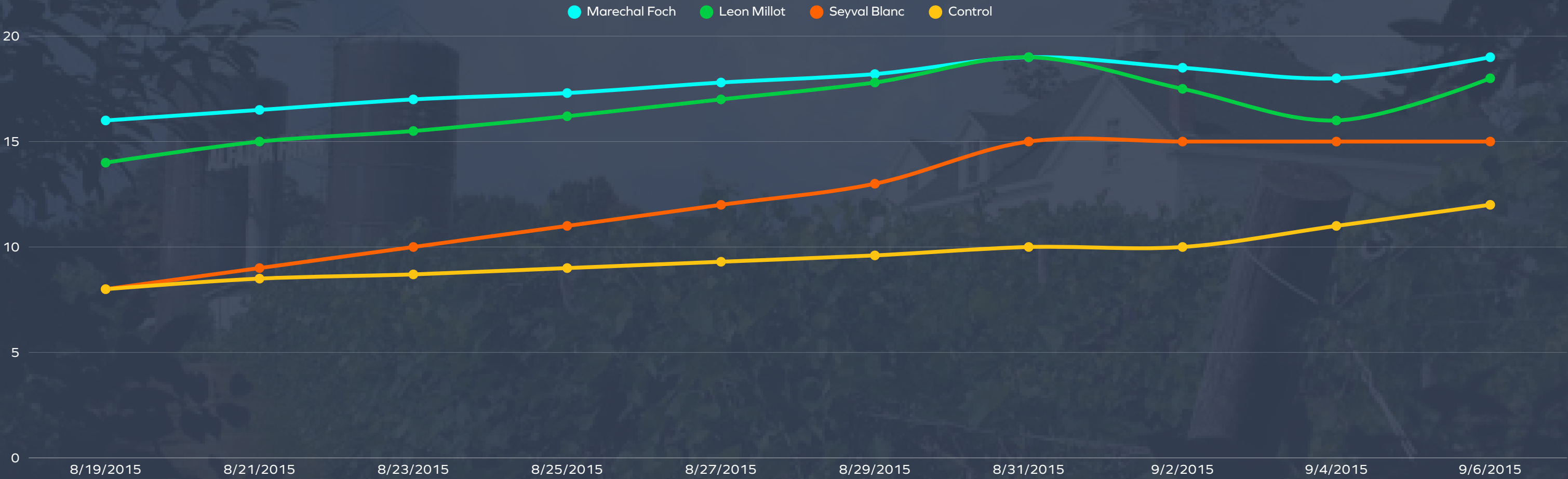
Program - Organic Botrytis cinerea Suppression

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 run off 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.

Brix Degrees Measured Over Time



Case Studies

Corn

West Point, Iowa

For generations, this family farm in West Point, Iowa has relied on corn and soybeans. In 2022, the current farmer began using Holganix to rebuild soil health and reduce input costs. After his first season, the improvements were clear enough for him to transition from full till to no-till, setting the foundation for higher yields, lower fertilizer use, and healthier soil across his acres.



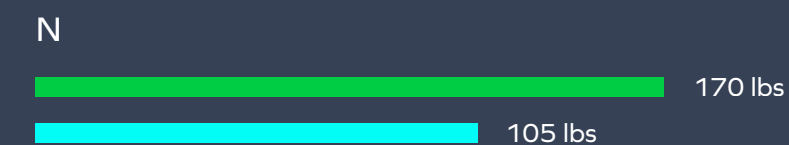
Corn and soybean yields have both increased, with stronger early-season growth and more uniform stands.



Reduced Fuel Costs, No-Till

Lake Preston, SD

● Control ● Holganix



“Twenty years ago, my dad was proud of 60-bushel beans. Now we’re talking 80–90 bushels, and Holganix is helping us get there while spending less.”



holganix

GROWERS TELL IT BEST

Economic Analysis and Additional Data

- Anhydrous ammonia is currently \$ 1000/ton or \$.42/N#.
- UAN (32%) is almost \$600/ton or \$.75/N#.
- Average value is \$.60/N#.
- DAP (18-46-0) is \$920/ton or roughly \$1/P#.
- Potassium (K) (0-0-60) values are around \$450/ton or \$.375/K#.
- Price of Corn is \$4.00 per bushel and soybeans \$10.00 per bushel.

Corn & Soybean Data

- Bio 800+ (260 bushel) – Control (220 bushel) = 40 bushel corn yield difference
- 40-bushel yield difference * \$4/bushel = \$160 additional income
- Bio 800+ (84 bushel) -Control (65 bushel) = 19 bushel soybean yield difference * \$10 = \$190
- Control used 220# N while Bio 800+ used 160# N for 60#N difference
- 60N# * \$.60/N# = \$36 saving in N fertilizer
- Control used 200# of Phosphorus (200# of 18-46-0 or 92# actual P) versus zero for Bio 800+
- 92# Actual P * \$1.00/P# = \$92 savings on P Fertilizer
- Control used 200# of Potassium (200# of 0-0-60 or 120# actual K) versus zero for Bio 800+
- 120# Actual K * \$.375/k# = \$45 savings on P Fertilizer

Additional Cost Data for Bio 800+

- Holganix Bio 800+ is \$40 per gallon or \$20 per gallon per application (2x, Spring and Fall)
- Application fee in Fall is \$20 per acre. Holganix Bio 800+ is applied in Spring with planter or in herbicide.

Corn		
+Bushels	Price	Dollars
40 bushels	\$4.00/bu	\$160

Fertilizer		
Nitrogen lb	Price	Dollars
60 lb N	\$0.60	\$36
Phosphorus lb P	Price	
92 lb	\$1.00	\$92
Potassium lb P	Price	
120 lb K	\$0.38	\$45
Total Income		\$333

Savings/Acre		
Corn	\$333-\$60	\$273/Acre
Carbon Credit		\$70/Acre
Total Savings		\$343/Acre

Soybean		
+Bushels	Price	Dollars
19 bushels	\$10/bu	\$190
Total Income		\$190

Additional Costs		
Additional Cost Corn & Soybeans	Price	Expense
.5 gallon Bio800+ Spring Application	\$40	\$20
.5 gallon Bio800+ Fall Application	\$40	\$20
Fall Application Cost	\$20/Acre	\$20
Total Cost/Acre		\$60

Saving/Acre		
Soybeans	\$190-\$60	\$130
Carbon Credit		\$70/Acre
Total Savings		\$200/Acre

Corn

Soybeans

Wheat

Lake Preston, South Dakota

For generations, this family farm near Lake Preston, South Dakota, has grown corn, soybeans, and wheat. Looking to improve profitability while preserving the land for future generations, the family turned to Holganix to enhance soil health and reduce input costs. Today, with the fourth generation involved in the operation, they continue to focus on sustainable practices that strengthen crop performance and leave the farm in better condition than they found it.

"Six years ago, when I first heard the Holganix story, what drew me in was the diversity of the product."



By cutting nitrogen 40% and eliminating dry phosphorus and potassium fertilizers, we've improved corn and soybean yields while achieving stronger early-season growth and more uniform stands.



Reduced Fuel Costs, No-Till

Lake Preston, SD

● Control ● Holganix

N



P



Same Starter

K



Same foliar

Corn Yield



Bean Yield



"The soil crumbles in your hand in the spring, just like a piece of chocolate cake."

 Holganix: Jon Nelson - Reducing Fertilizer by 40%



REDUCING FERTILIZER BY 40%

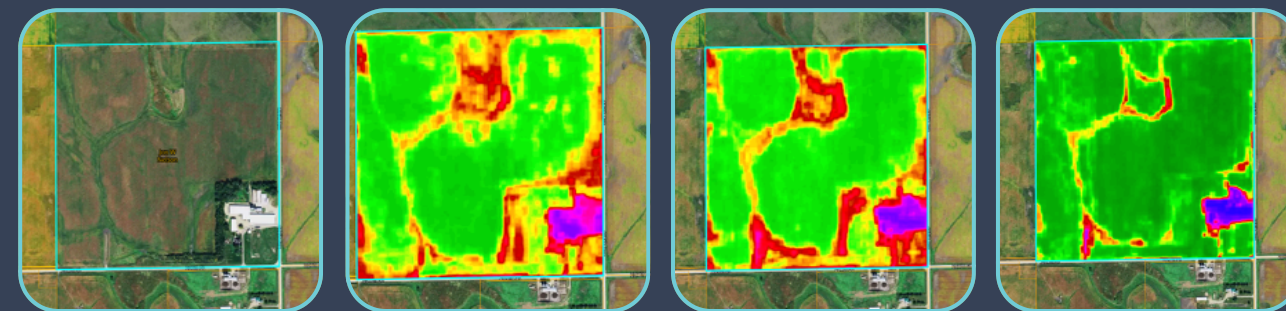


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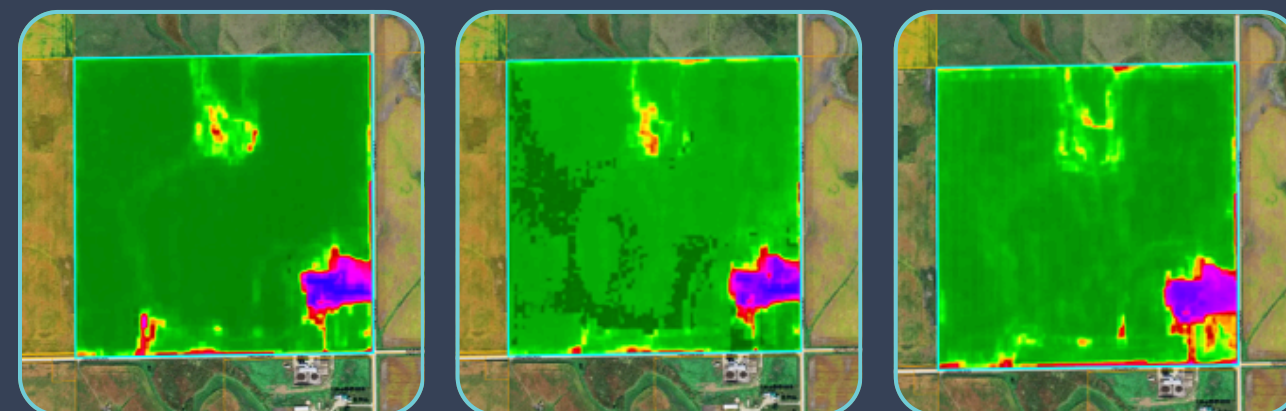
Jon Nelson, in Lake Preston, South Dakota, won the 2023 South Dakota soybean yield contest (Group 2, No-till, Non-Irrigation Category) with a yield of 82.5 bushels compared to a county average of about 42.



2017

2018

2019
1st year of
Holganix



2020

Very Wet

2021

Very Dry

2022

Very Dry

“We used to be conventional till, but after seeing what Holganix Bio 800+ Revive could do for root growth in one year, we decided to commit to no-till. We sold the tillage equipment, and it’s been really interesting. People talk about there being a 3-to-5 year lag in yield as you move from conventional to no-till, but we haven’t seen that. I really credit that to Holganix Bio 800+ growing the biology faster in our soils. It’s also made our soils more aggregated and, in the process, our bulk densities have really decreased.”

JOHN NELSON
LAKE PRESTON, SOUTH DAKOTA



Cattle Manure History

Slowly cut N from >1 lb/bu to 0.55, and eliminated P and K

“The beans received less than 10 inches of rain this year, and we used no fertility at all. I just used Holganix and some micronutrients.



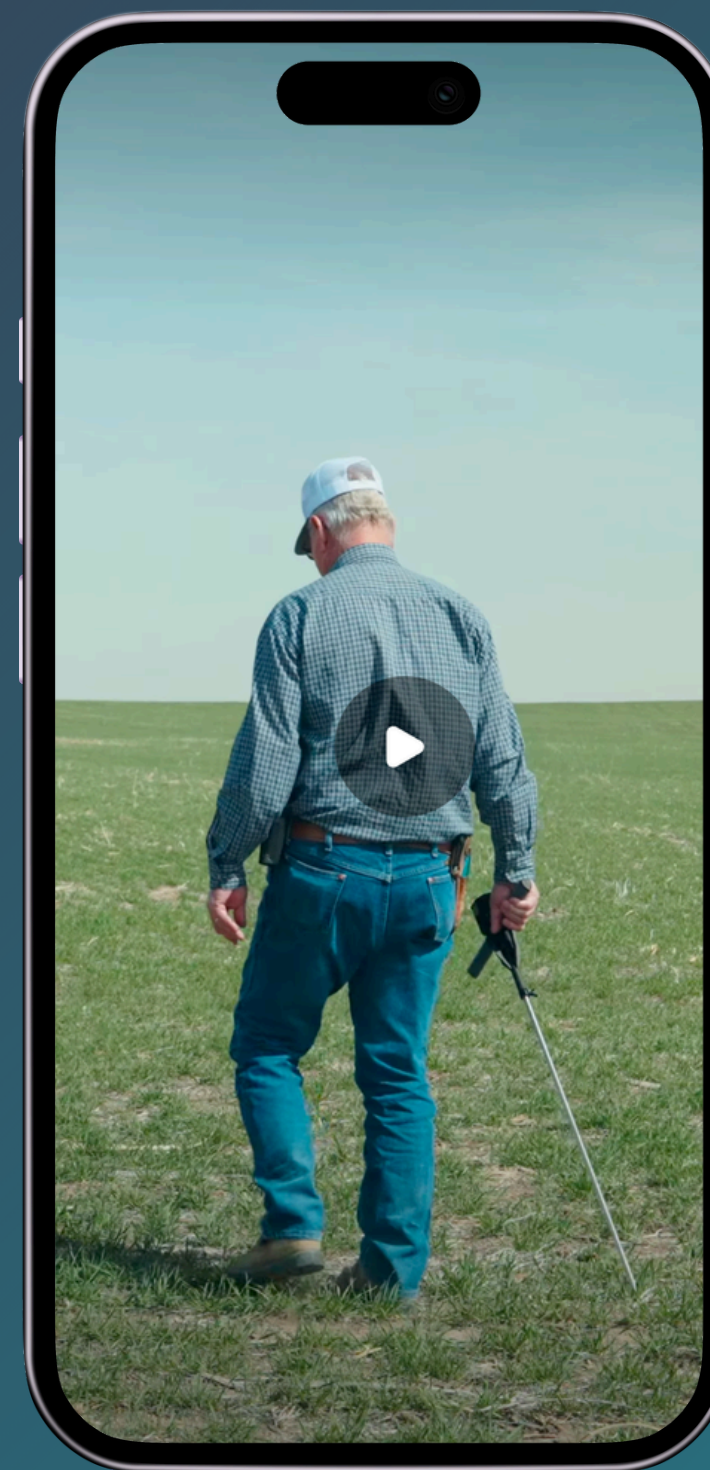
Corn

Soybeans

Wheat

Ogallala, Nebraska

Farming in Western Nebraska, where high winds and heat create challenging conditions, this grower has found confidence in Holganix to support soil health and reduce reliance on conventional tillage. As he prepares for his second year with Holganix Bio 800+ products, he has already seen impressive results, including significantly enhanced root development in treated plants. The stronger root systems have reinforced his belief that Holganix Bio 800+ can help build healthier, more resilient soils for the future.



He saw a noticeable difference in the root system.

30-40 bushel per acre yield increase in areas where he used Holganix Bio 800+ Revive.

Corn

Soybeans

Dahinda, Illinois

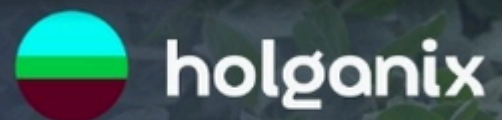
The Strom family farms 6,000 acres of corn and soybeans in Dahinda, Illinois. After first trying Holganix Bio 800+ in 2019, they expanded its use across their entire operation. Through 14 side-by-side field comparisons, the Stroms documented a 40% increase in microbial biomass and a 42% increase in fungi by weight, with microbial biomass improving nearly 225% after three years. They share how Holganix Bio 800+ Revive has enhanced root development, improved soil structure, increased nutrient cycling, and supported their transition to reduced tillage and lower fertilizer inputs while maintaining strong yields.



“We have dropped our fertilizer rates pretty significantly. Making fertilizer reductions is one of those things that makes a farmer nervous because of the way we farmers have been taught. Currently, we are using 15% less nitrogen than in years past. We have Holganix pretty much paid for with reductions before harvesting the crop.”

**GRANT STROM
DAHINDA, ILLINIOS**

 **The Secret to Better Yields? It's All in the Soil Microbes**
Holganix



BUILDING BETTER SOIL: GRANT STROM'S HOLGANIX RESULTS

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Corn Soybeans

Chilhowee, Missouri

Shackelford Farms is a third-generation family operation where fathers, sons, brothers, and nephews work together to build a stronger future for the farm. Began using Holganix Bio 800+ in the fall of 2024, initially applying it to some of their most challenging acres—fields with heavy black gumbo soils that had historically been difficult to farm. After seeing encouraging results, they expanded the program to 100% of their acres in 2025. Since implementing Holganix Bio 800+, the family has observed noticeable improvements in soil structure, texture, and tilth throughout the soil profile—not just in the top few inches. Fields that once struggled are now showing increased productivity, with some of their toughest acres producing some of the best crops they've ever grown.



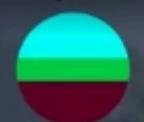
“After 11” of rain in Missouri over the past month, this field’s soil should’ve turned to concrete.

But thanks to the biology we’ve built into the soil, compaction hasn’t been an issue.”

STEVE SHACKELFORD
CHILHOWEE, MISSOURI

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 **Why Your Soil Needs Bio 800+: A Look at Shackelford Farm**

 **holganix**

**BUILDING HEALTHIER
SOILS WITH BIO 800+**



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