



# Product Performance Book

[holganix.com](http://holganix.com)







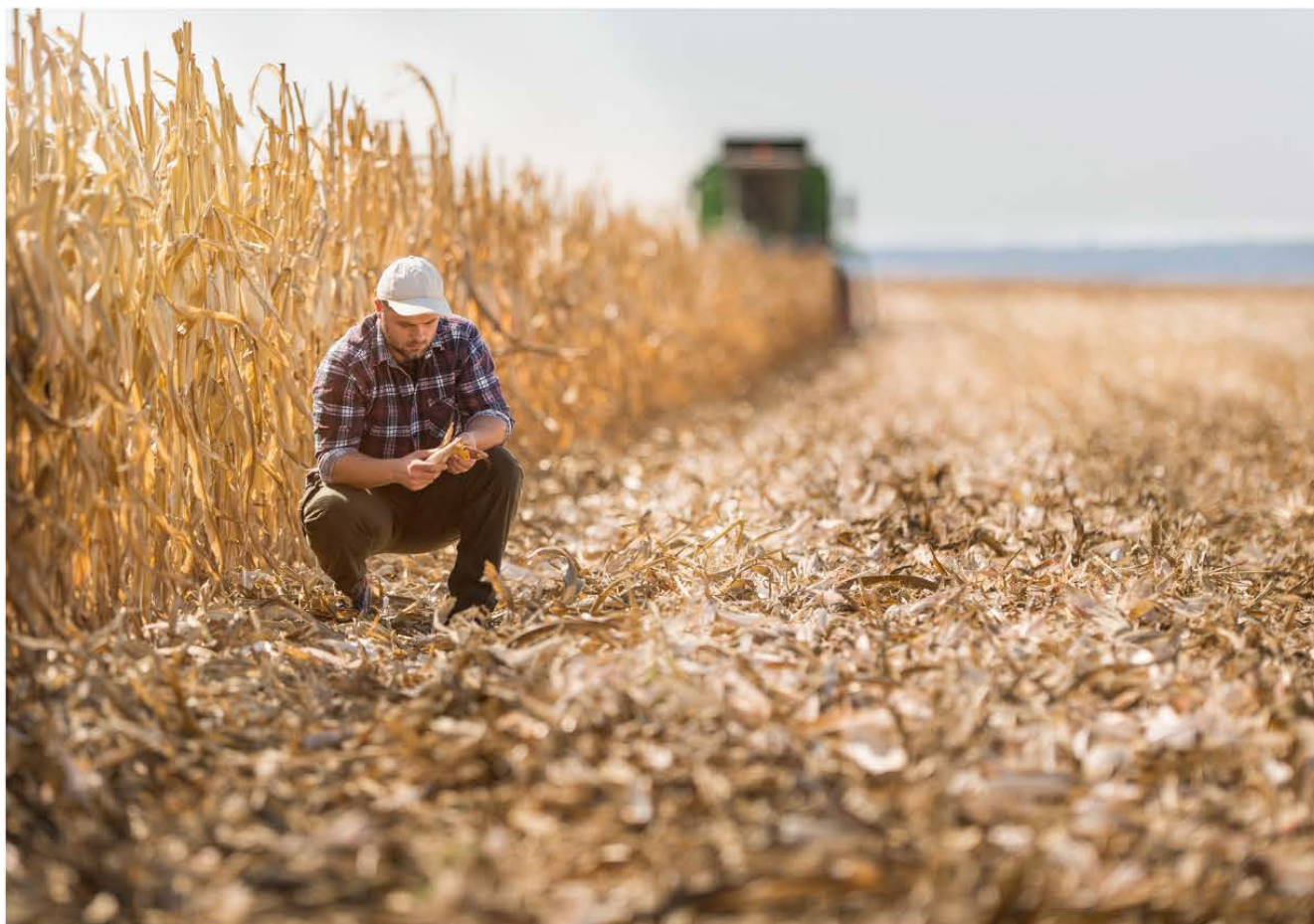
# BIO 800<sup>+</sup>

## **Soil Health. Yield. Sustainability.**

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

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.

- 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 Better Able To Withstand Drought, Wind and Hail
- Accelerate Residue Breakdown
- Restore Needed Beneficial Soil Microbes Depleted By Tillage, Freezing, Flooding, Fungicides, And Other Stressors



# CORN DATA

- Rate Recommendation: 0.5 gal per acre at planting
- Typical Yield Increase: 6-11 bu/acre
- Key Benefits:
  - Increased root mass
  - Thicker stalks, stronger brace roots
  - Larger ears with better fill

Several years of university and grower data have been compiled on Holganix Bio 800<sup>+</sup> on corn. The photos and testimonials enclosed are just a sample. For additional information please visit: [www.Holganix.com/Ag-data](http://www.Holganix.com/Ag-data)



# CORN, WEST CENTRAL INDIANA

## Unsolicited Customer Photos



These pictures were taken on September 21, 2021. The photos demonstrate an increase in root mass and a taller, greener stalk on the Holganix Bio 800<sup>+</sup> treated crop. "Needless to say, my interest level just perked up!" – Farmer

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	Preplant – Applied 5/4/21
App Method:	Broadcast with sprayer
Other Products Used:	8 oz Veltyma Fungicide applied to whole field at R2





# CORN, WEST CENTRAL INDIANA

## Unsolicited Customer Photos

These photos are from the same grower on page 3. "Over the past few weeks, I've been watching a check strip, in a field of corn that we left, that's started sticking out like a sore thumb in aerial imagery." The photos demonstrate that Holganix Bio 800+ treated corn has a greener stalk versus the control. The inner pith of the treated corn is healthier, compared to the dried stalk on the right.





# CORN, WEST CENTRAL INDIANA

## Unsolicited Customer Photo

This is the same crop and farmer from the previous page. This grower saw a +54 bushel per acre advantage. When the corn was first planted, the grower was a bit skeptical. However, by the end of the season, he was shocked by the difference in both the root mass and yield with the Horganix versus the control.

### Horganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	Preplant - Applied 5/4/21
App Method:	Broadcast with sprayer
Other Products Used:	8 oz Veltyma Fungicide applied to whole field at R2





Control

Horganix Bio 800<sup>+</sup>

# CORN, INDIANA

**Unsolicited Customer Photo**

## **Horganix Bio 800<sup>+</sup> 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.



# CORN, JONESBORO, INDIANA

## Unsolicited Customer Photo

Control

Holganix Bio 800<sup>+</sup>



The grower saw a +5 bushel per acre yield increase over the control.

### **Holganix Bio 800<sup>+</sup> Treatment:**

Rate:	0.5 gal per acre
App Timing:	2 weeks after emergence
App Method:	Sprayed over the top
Other Products Used:	Only 10 gallons of water

# CORN, NORTH DAKOTA

## Unsolicited Customer Photo



The farmer planted this corn in 42 degrees Fahrenheit soil. "Everyone said I was crazy planting in the cold dirt 7 days ago. Got a sprout on it. I said, when you have a good seed, treat and put Holganix on, no worries." This picture was taken on April 30, 2021.

### **Holganix Bio 800<sup>+</sup> Treatment:**

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	In-furrow
Other Products Used:	Fertilizer 16-24-6



# CORN, NORTH DAKOTA

## Unsolicited Customer Photo



This is the same crop and farmer from the previous page. The photo demonstrates fully pollinated 89-day corn.

Looks like he wasn't crazy!

This picture was taken on July 27, 2021.

### **Holganix Bio 800<sup>+</sup> Treatment:**

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	In-furrow
Other Products Used:	Fertilizer 16-24-6



# CORN, NORTH DAKOTA

## Unsolicited Customer Photo

This picture was taken on August 12, 2021. The grower determined that the Holganix Bio 800<sup>+</sup> 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<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	In-furrow
Other Products Used:	Fertilizer 16-24-6





# CORN, CENTRAL IOWA

## Unsolicited Customer Photos

These pictures were taken in June, 2021. The grower determined that the Horganix Bio 800<sup>+</sup> and Volcanic Rock Dust treated corn has far better roots, compared to the control. According to the dealer, "the customer was sold on this dig up."

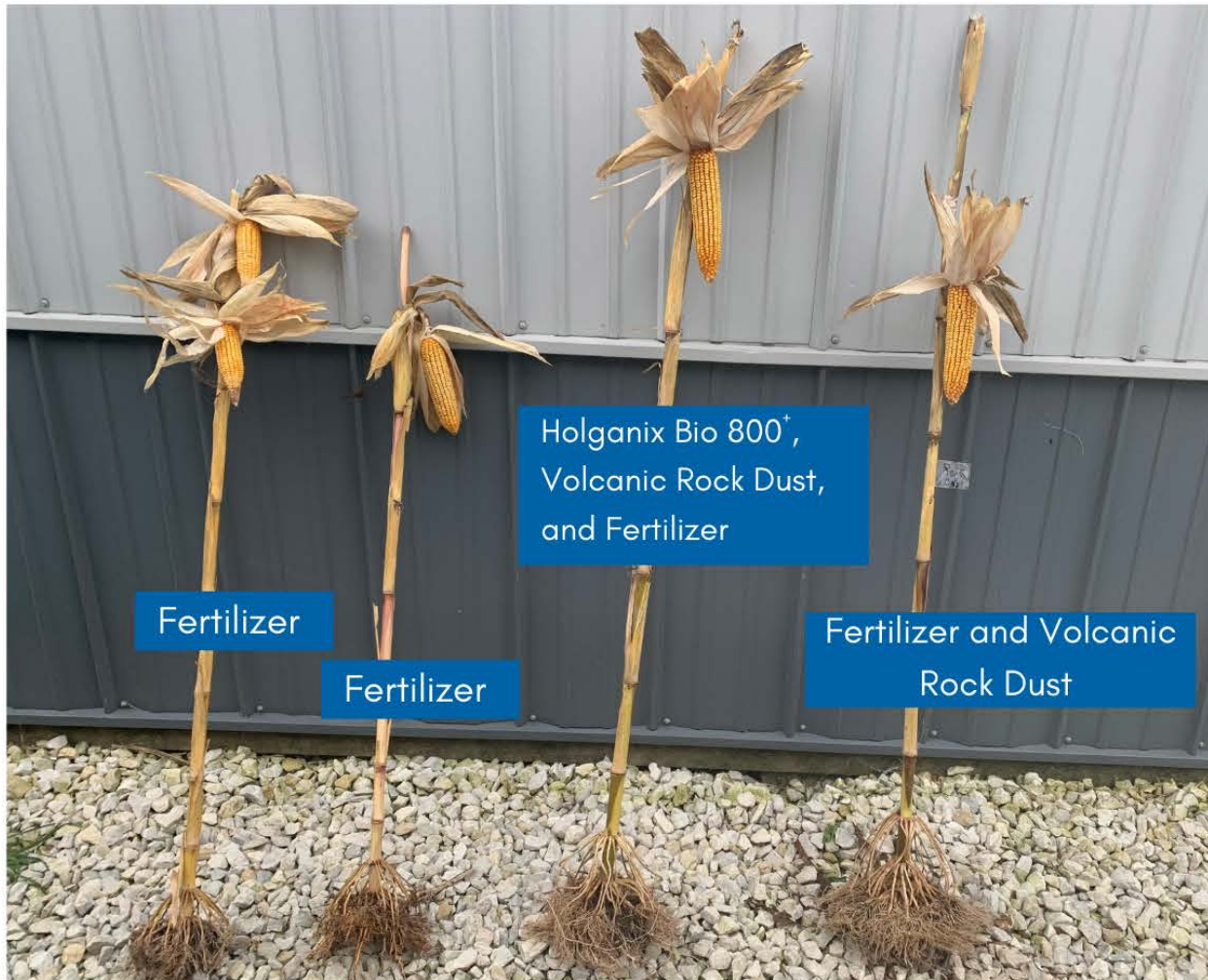
### Horganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	Foliar
Other Products Used:	Volcanic Rock Dust



# CORN, CENTRAL IOWA

## Unsolicited Customer Photo



The grower noticed a lot more uniform kernels and bigger roots when adding Holganix Bio 800<sup>+</sup>. According to the grower, "The Holganix and rock dust, despite dry year, had the biggest ears and healthiest plants compared to the control side." The picture was taken on September 23, 2021.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	Foliar
Other Products Used:	180 anhydrous plus 0-60-60 Fertilizer and Volcanic Rock Dust





# CORN, CENTRAL IOWA

## Unsolicited Customer Photos

The photos are from the same crop and farmer from the previous page. According to the grower, "The combination of Horganix Bio 800<sup>+</sup> and volcanic rock dust was the clear winner. The control corn had much smaller rounds at the top with only 15 kernels, while the corn treated with Horganix and volcanic rock dust were filled to the tip, had larger rounds with about 16 kernels around the tip of the corn."





# CORN, SOUTHWEST KANSAS

## Unsolicited Customer Photo

This picture was taken on June 18, 2021. According to the grower, the Holganix Bio 800<sup>+</sup> treated corn has "larger brace roots, thicker corn stalks, and have more root hairs versus the control." Holganix vs. control: "Bigger roots, bigger stalk, and bigger factory."

### Holganix Bio 800<sup>+</sup> Treatment:

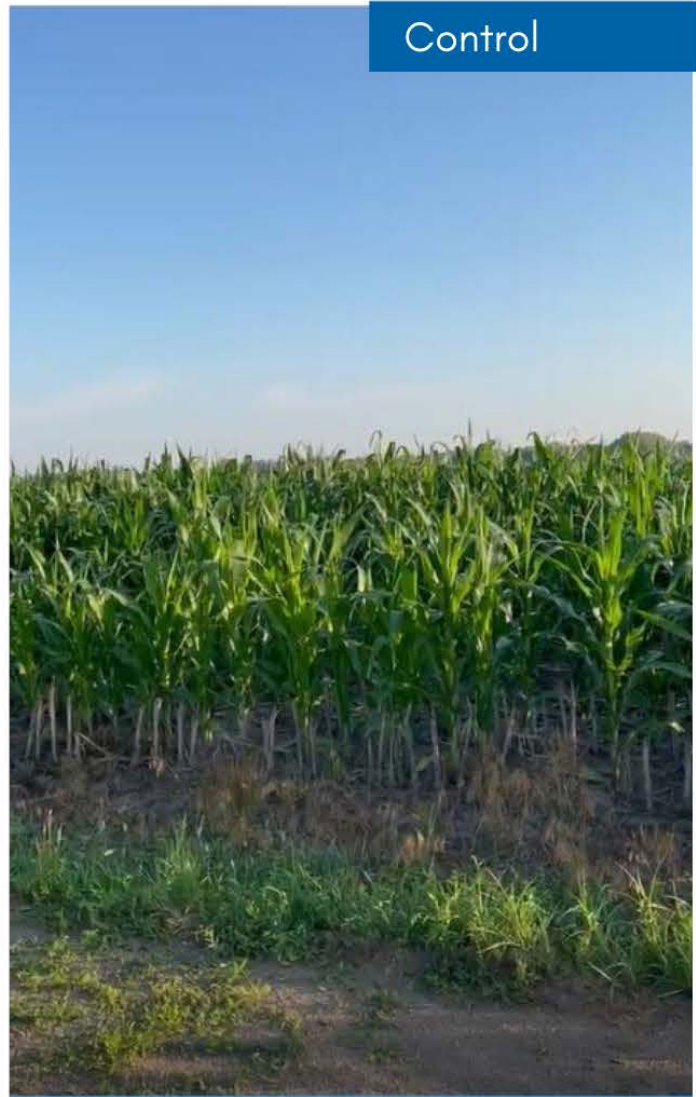
Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	
Other Products Used:	



Holganix Bio 800<sup>+</sup>



Control



# CORN, KANSAS

## Unsolicited Customer Photos

These photos were taken July 2, 2021. Holganix Bio 800<sup>+</sup> was applied at 0.5 gal per acre.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	
App Method:	
Other Products Used:	



# CORN, CENTRAL ILLINOIS

## Unsolicited Customer Photo

This farmer saw a +15 to +30 bushel per acre advantage. The corn was planted on June 7 and was a corn on corn rotation. Picture was taken on October 1. Corn was planted on side-by-side rows 30 inches apart. The grower randomly decided a starting point and pulled 20 ears per row. This was a very wet season.

### Horganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	In-furrow
Other Products Used:	3.5 gal per acre 10-34-0 Fertilizer





Control

Holganix Bio 800<sup>+</sup>



Control

Holganix Bio 800<sup>+</sup>

# CORN, CENTRAL ILLINOIS

## Unsolicited Customer Photos

This corn was planted on June 6. These pictures were taken on June 28. Notice the improved crop development. According to the grower, "You can see the difference between the Holganix and the control in color and height from the road!"

### Holganix Bio 800<sup>+</sup> 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.

# CORN, SPRINGFIELD, ILLINOIS

## Unsolicited Customer Photos



The crop was planted May 12 and these pictures were taken on June 19. There was no measurable rain since the crop had been planted. This was a corn-on-corn rotation.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	
App Method:	In-furrow
Other Products Used:	10-34-0 at 3.5 gal per acre



# CORN, SPRINGFIELD, ILLINOIS

## Unsolicited Customer Photos



This is the same crop and farmer from the previous page. See previous page for photo information.



# CORN, NORTHWEST ILLINOIS

## Unsolicited Customer Photo



Nutrien Riser 7-17-3 & Holganix Bio 800<sup>+</sup>

Holganix Bio 800<sup>+</sup> Only

This photo was taken June 27. Holganix Bio 800<sup>+</sup> was applied at 0.5 gal per acre.



Control



Holganix Bio 800<sup>+</sup>



# CORN, WESTERN MISSOURI

## Unsolicited Customer Photos

The farmer planted this corn on April 27. The photos above were taken on May 10. The Holganix Bio 800<sup>+</sup> treated crop demonstrates improved root formation compared to the control.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	In-furrow
Other Products Used:	All other inputs used were replicated in the control.





Control

Holganix Bio 800<sup>+</sup>

# CORN, WESTERN MISSOURI

## Unsolicited Customer Photo

The Holganix Bio 800<sup>+</sup> treated crop has improved root formation compared to the control. The grower also saw a +5 bushel per acre advantage.

### Holganix Bio 800<sup>+</sup> 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.



# CORN, NORTHWEST MISSOURI

## Unsolicited Customer Photos

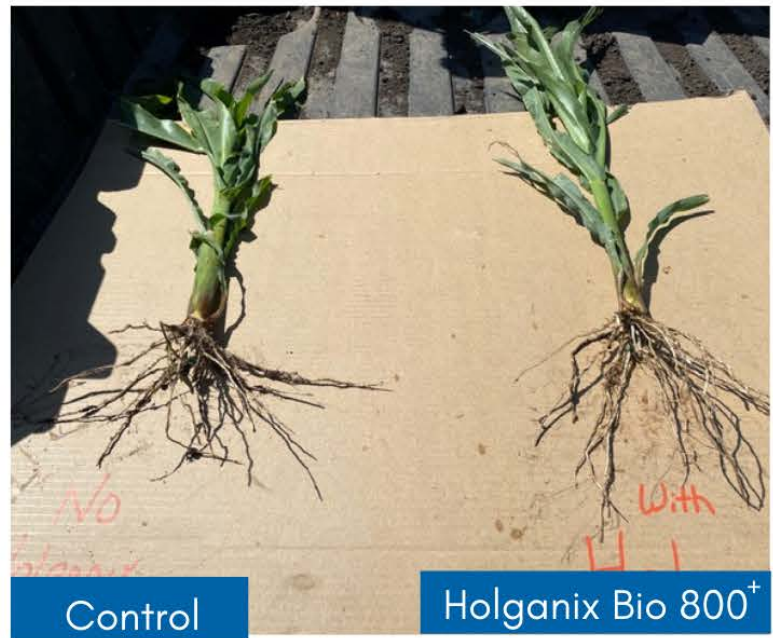
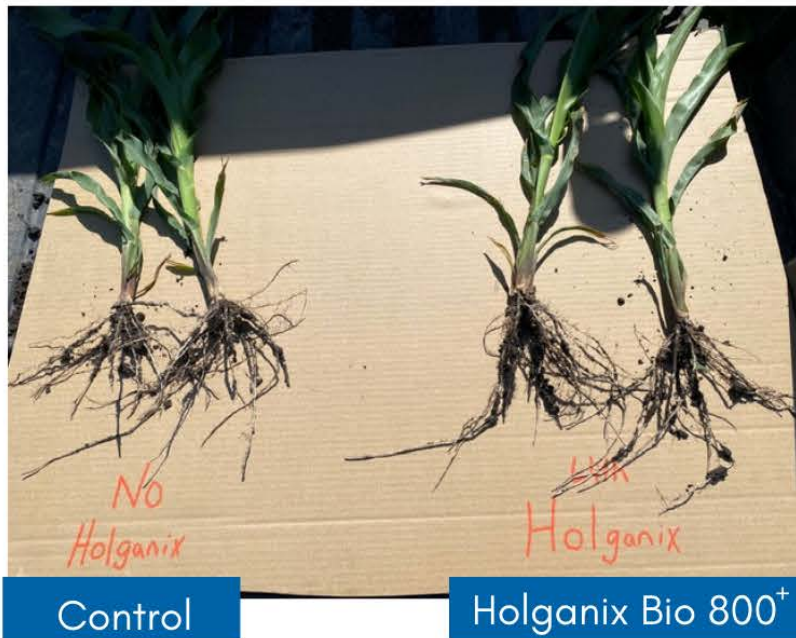


### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	
App Method:	In-furrow
Other Products Used:	

# CORN, EASTERN SOUTH DAKOTA

## Unsolicited Customer Photos



The Holganix Bio 800<sup>+</sup> treated crop is taller with longer, thicker roots. The grower saw a +2 to +5 bushel per acre increase in yield.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	In-furrow
Other Products Used:	



# CORN, NORTHEAST COLORADO

## Unsolicited Customer Photos



Holganix Bio 800<sup>+</sup>

Both plants were treated with Holganix Bio 800<sup>+</sup>. According to the grower, "I dug one up and was like, there's no way they all look that good. So I dug another one up."

The grower saw a +4 bushel per acre increase in yield

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	Planting
App Method:	In-furrow
Other Products Used:	10-34-0





Holganix Bio 800<sup>+</sup>



Holganix Bio 800<sup>+</sup>

# CORN, ONTARIO, CANADA

## Unsolicited Customer Photos

These pictures were taken on June 11, 2021. The grower was amazed to see the root mass and a 5-foot tap root on corn treated with Holganix Bio 800<sup>+</sup>. The grower was astonished that he could even pull the root up without breaking it.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	In-furrow
Other Products Used:	4.5 gals of starter liquid fertilizer





# CORN, ONTARIO, CANADA

## Unsolicited Customer Photo

This grower saw a +16.8 bushel per acre advantage. The corn was planted May 19. Grower determined that the Horganix Bio 800<sup>+</sup> treated corn has larger brace roots and thicker stalks.

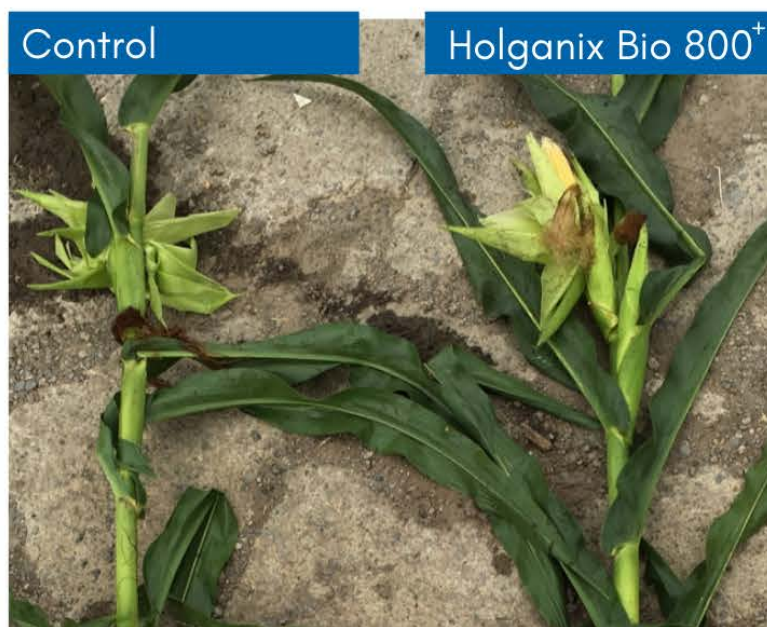
### Horganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	3 weeks after planting
App Method:	Foliar
Other Products Used:	



# CORN, ONTARIO, CANADA

## Unsolicited Customer Photos



Photos are from the same grower on page 27. The photos demonstrate an increase in root mass and a thicker stalk on the Holganix Bio 800<sup>+</sup> treated crop.



# CORN, SOUTHERN AUSTRIA

## Unsolicited Customer Photos



Control

Holganix Bio 800<sup>+</sup>



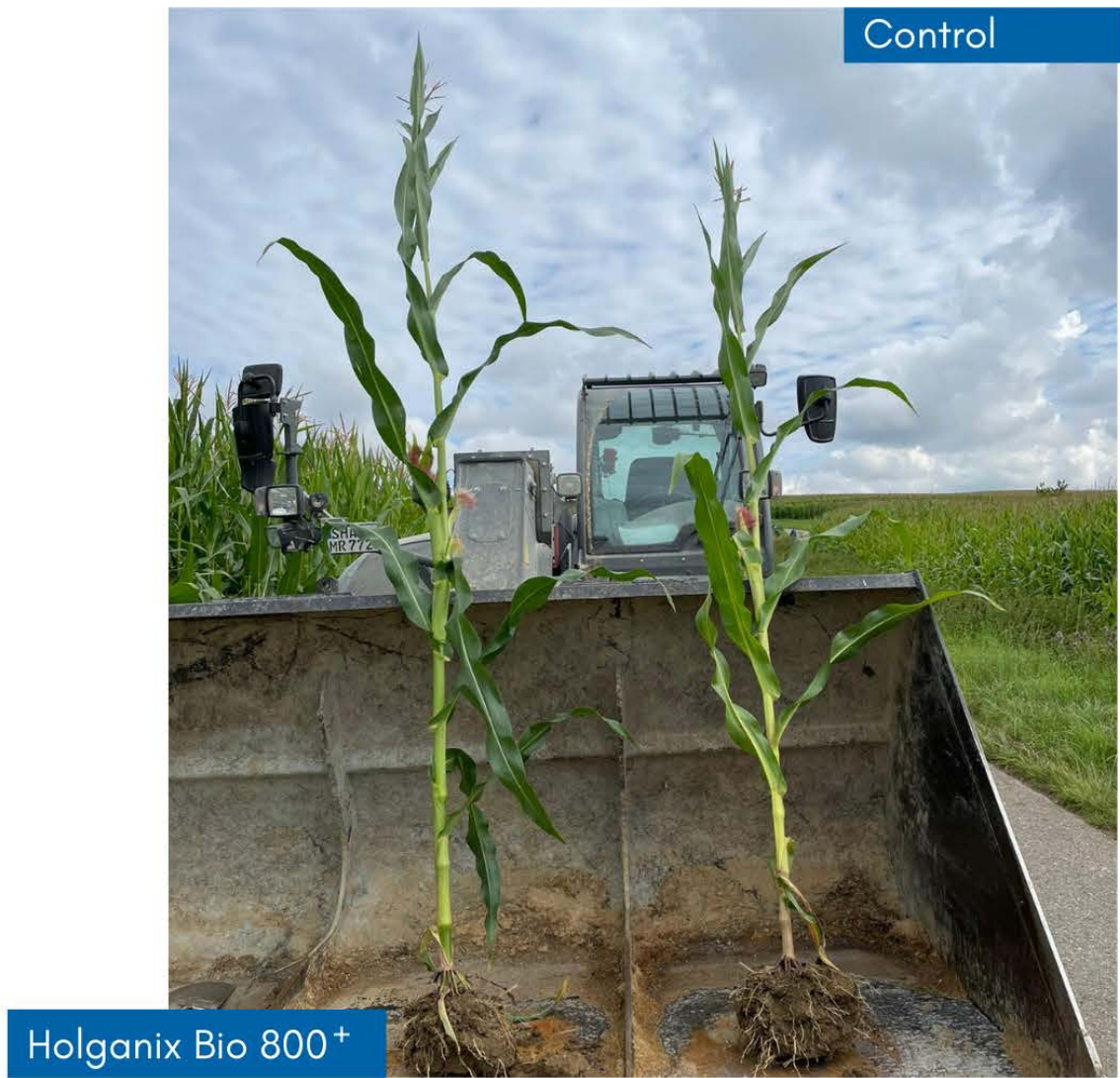
Holganix Bio 800<sup>+</sup>

Control

These pictures were taken on July 3, 2021. The grower saw an 8.5-gram increase in weight of the roots per plant treated with Holganix Bio 800<sup>+</sup>, compared to the control.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	
App Method:	
Other Products Used:	



# CORN, SOUTHERN GERMANY

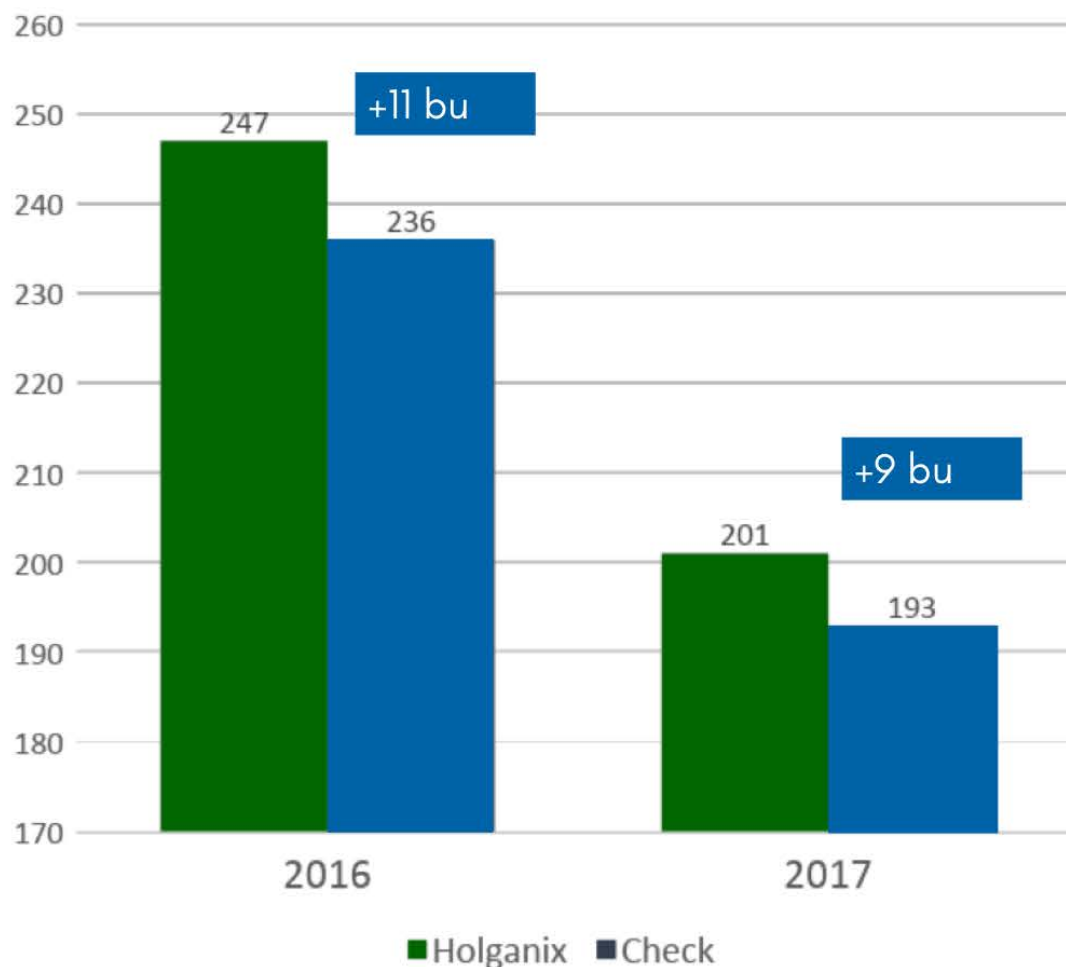
## Unsolicited Customer Photo

This photo was taken on August 5, 2021. The Holganix Bio 800<sup>+</sup> treated crop is taller compared to the control.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	
App Method:	
Other Products Used:	





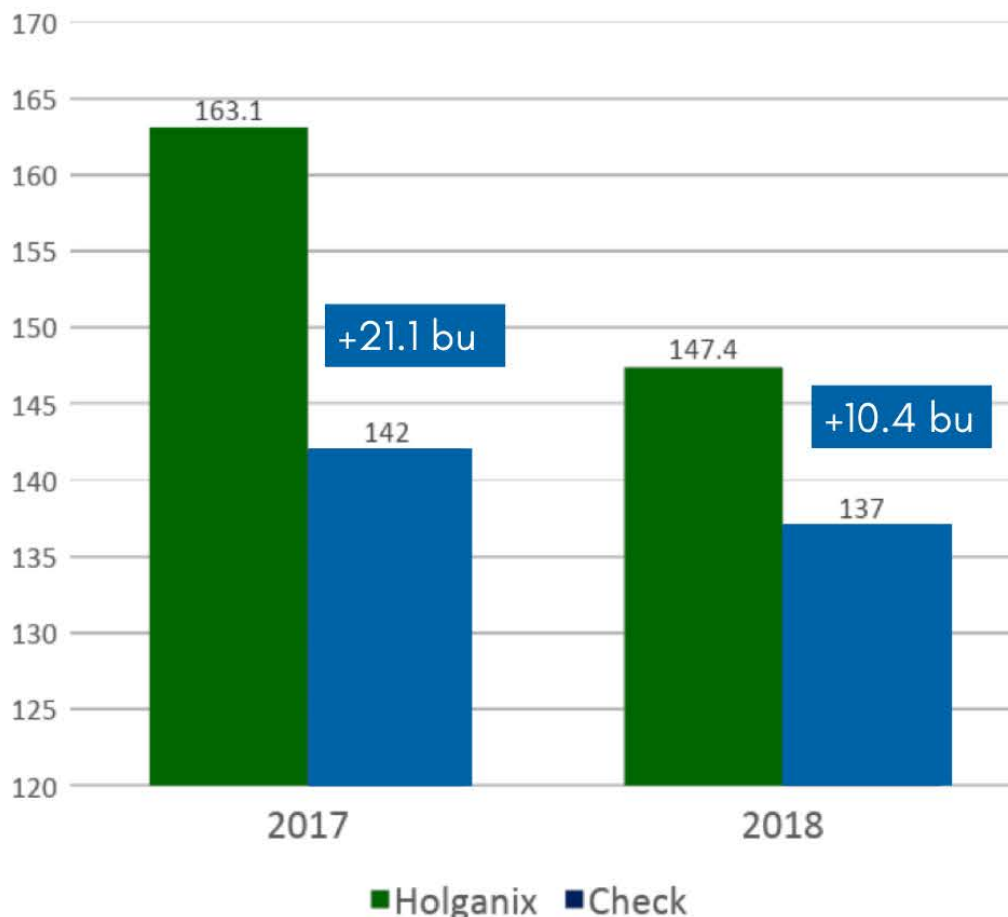
# CORN, NORTH CENTRAL ILLINOIS

## Third Party Research Farm Data

Replicated plots on non-irrigated land. The 2016 rotation was off of soy.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	In-furrow
Other Products Used:	All other inputs were replicated in the control.



# CORN, WESTERN MISSOURI

## Third Party Research Farm Data

"Best looking corn plot on the farm!" – Researcher.

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

### Holganix Bio 800<sup>+</sup> 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 DATA

- 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<sup>+</sup> on soybeans. The photos and testimonials enclosed are just a sample. For additional information please visit: [www.Holganix.com/Ag-data](http://www.Holganix.com/Ag-data)

# SOYBEAN, CENTRAL INDIANA

## Unsolicited Customer Photo



Control

Holganix Bio 800<sup>+</sup>

According to the grower, the untreated roots came up with no dirt, but the treated roots were much more extensive and pulled a lot of dirt. He saw +4 bushel per acre increase in yield over the control.

### **Holganix Bio 800<sup>+</sup> Treatment:**

Rate:	0.5 gal per acre
App Timing:	2 weeks after emergence
App Method:	Foliar
Other Products Used:	10 gallons of water



# SOYBEAN, EASTERN, SOUTH DAKOTA

## Unsolicited Customer Photo



According to the dealer, other growers he works with in the area using Holganix Bio 800<sup>+</sup> saw a 12 bushel per acre yield increase over the control.

### **Holganix Bio 800<sup>+</sup> Treatment:**

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	In-furrow
Other Products Used:	



# SOYBEANS, NORTH DAKOTA

## Unsolicited Customer Photo

This picture was taken on July 22, 2021. According to the grower, "this field has seen only six inches of rain since January 1, 2021."

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	In-furrow
Other Products Used:	Fertilizer 16-24-6





# SOYBEAN, NORTH DAKOTA

## Unsolicited Customer Photo

Soybeans were planted on June 15 due to hail damage that damaged an earlier crop. According to the grower, "We noticed a difference in the rooting between the Horganix crop and the control pretty quickly."

### Horganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	5 days after planting
App Method:	Foliar
Other Products Used:	

Control

Holganix Bio 800<sup>+</sup>



# SOYBEAN, NORTH DAKOTA

## Unsolicited Customer Photo

Same crop from previous page with picture taken just after flowering. The Holganix Bio 800<sup>+</sup> treated taproots run 8 inches into the soil. The untreated crop's taproots did not penetrate hardpan below seed level.

Just prior to harvest, 11 inches of snow hit the field. The snow flattened the control, while the Holganix Bio 800<sup>+</sup> treated crop pulled 33 bu/ac.





# SOYBEANS, SOUTHERN MINNESOTA

## Unsolicited Customer Photos

These pictures were taken on August 3, 2021. "I was scouting on some of the no-tilled soybeans where I applied Horganix 800<sup>+</sup> between the rows...noticed that the nodulation on the soybeans that have Horganix on them show twice the nodules, are larger nodules and the best nodule color I have ever seen." Note: These beans were planted in a severe drought area.

### Horganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	In-furrow
Other Products Used:	



Before



After Treating  
with Holganix



# SOYBEANS, CENTRAL OHIO

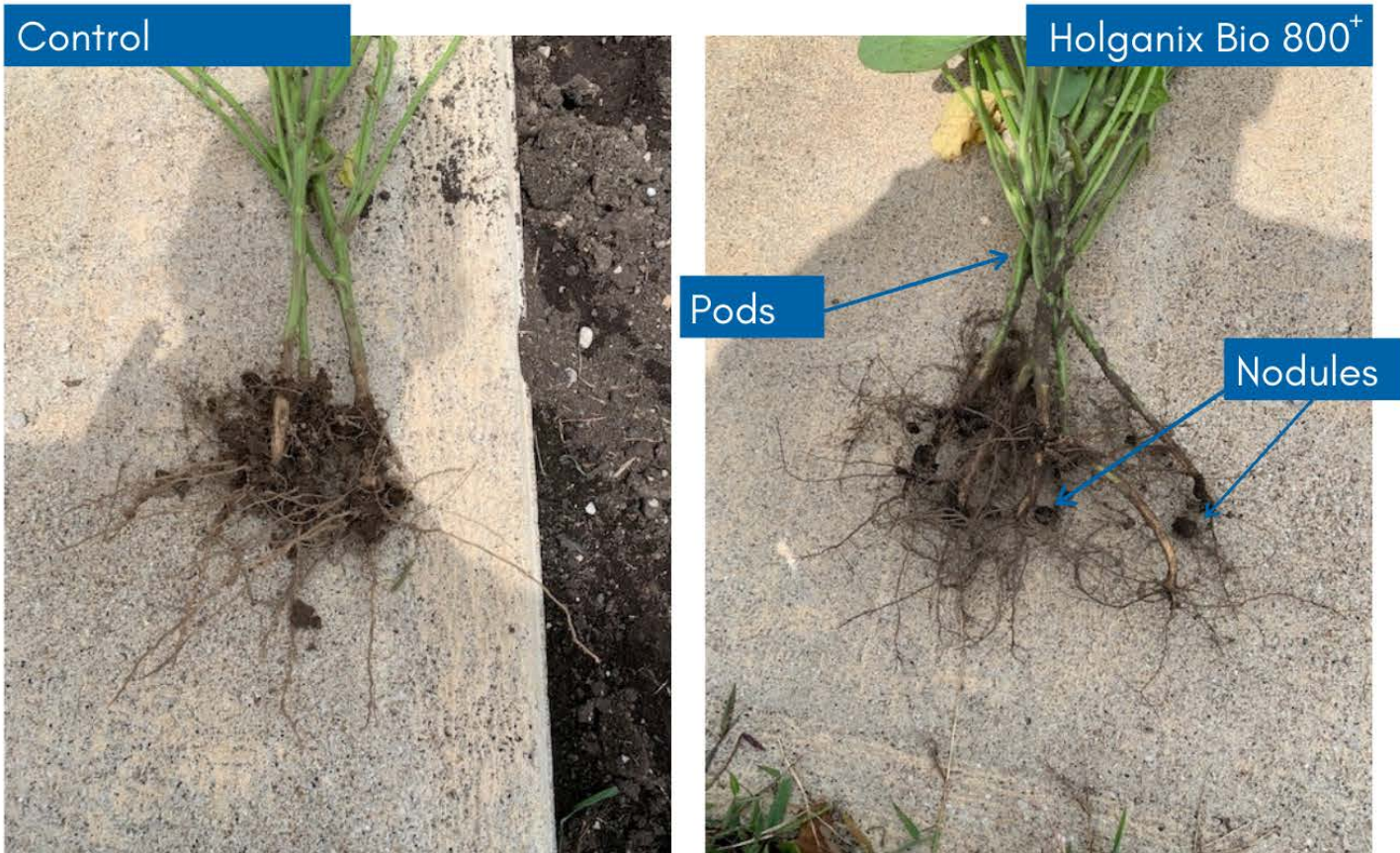
## Unsolicited Customer Photos

This grower used Holganix Bio 800<sup>+</sup> at burndown to accelerate debris breakdown and crop germination and establishment.

### Holganix Bio 800<sup>+</sup> 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





# SOYBEAN, WESTERN MISSOURI

## Unsolicited Customer Photos

Organic soybeans show improved root, nodule and earlier pod formations with Holganix Bio 800<sup>+</sup>.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	
App Method:	
Other Products Used:	

# SOYBEAN, NORTHWEST MISSOURI

## Unsolicited Customer Photos



The Holganix treated crop has thicker roots and more root hairs. It also has thicker stems.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	
App Method:	In-furrow
Other Products Used:	



# SOYBEAN, NORTHERN ILLINOIS

## Unsolicited Customer Photos



The crop was planted on May 31. Holganix Bio 800<sup>+</sup> was applied to the crop on the left at 2 qts per acre, in-furrow. The grower says he saw a +5 bushel per acre yield increase over the control.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	In-furrow
Other Products Used:	



# SOYBEANS, ONTARIO, CANADA

## Unsolicited Customer Photo

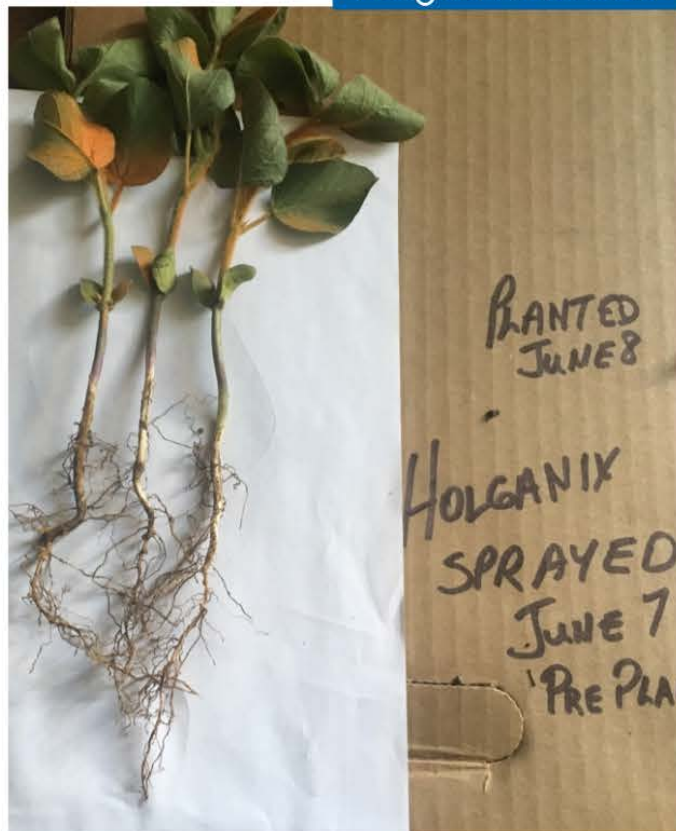
This picture was taken on June 11, 2021. "We are amazed at how much nodulation there was already this early in the season." According to the grower, other growers he works with 300 miles away, using Holganix Bio 800+, received a +5 bushel per acre yield advantage on soybeans, similar to what he has seen.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	
App Method:	
Other Products Used:	Pre-emergent Herbicide



Control

Holganix Bio 800<sup>+</sup>

# SOYBEAN, ONTARIO, CANADA

## Unsolicited Customer Photos

The grower saw a +3 to +8 yield advantage. The grower also saw longer roots with more root hairs with Holganix Bio 800<sup>+</sup> crop. Note: The orange spray paint was used by the grower to mark treated plants.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	One day pre-plant
App Method:	Foliar
Other Products Used:	All other inputs were replicated in the control.

Control

Holganix Bio 800<sup>+</sup>



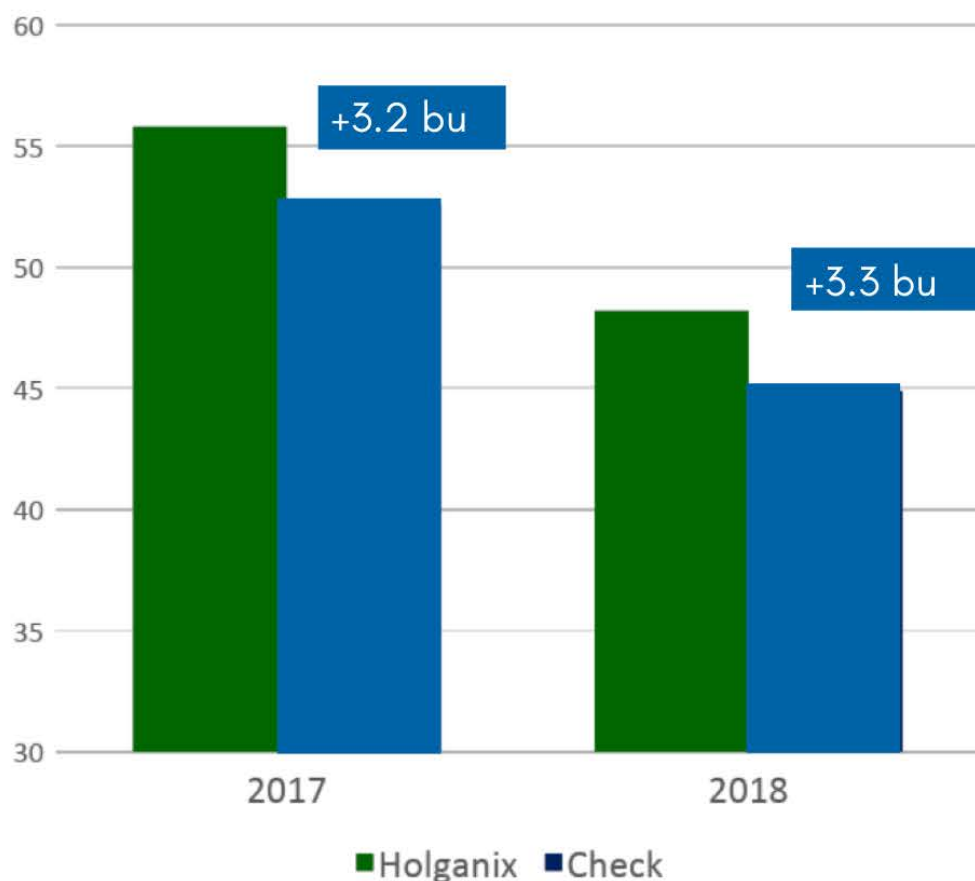
# SOYBEAN, ONTARIO, CANADA

## Unsolicited Customer Photo

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	One day pre-plant
App Method:	Foliar
Other Products Used:	All other inputs were replicated in the control.





# SOYBEAN, WESTERN MISSOURI

## Third Party Research Farm Data

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

### Holganix Bio 800<sup>+</sup> 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.



# WHEAT DATA

- Rate Recommendation: 0.5 gal per acre at planting. For winter wheat 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<sup>+</sup> on wheat. The photos and testimonials enclosed are just a sample. For additional information please visit: [www.Holganix.com/Ag-data](http://www.Holganix.com/Ag-data)





Control

Holganix Bio 800<sup>+</sup>

# WINTER WHEAT, KANSAS

## Unsolicited Customer Photo

The Holganix Bio 800<sup>+</sup> treated crop has thicker, deeper roots than the control including the crown roots. The grower saw a +12 to +18 bushel per acre advantage.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre in 15 gallons of water
App Timing:	5 days after planting
App Method:	Foliar
Other Products Used:	



Control

Holganix Bio 800<sup>+</sup>

# WINTER WHEAT, KANSAS

## Unsolicited Customer Photo

Same grower and spot as the previous pictures. Photo taken in spring, 2019. Holganix Bio 800<sup>+</sup> treated crop is 43 inches tall with 17 rows of seed compared to the control at 39 inches tall and 13 rows of seed.

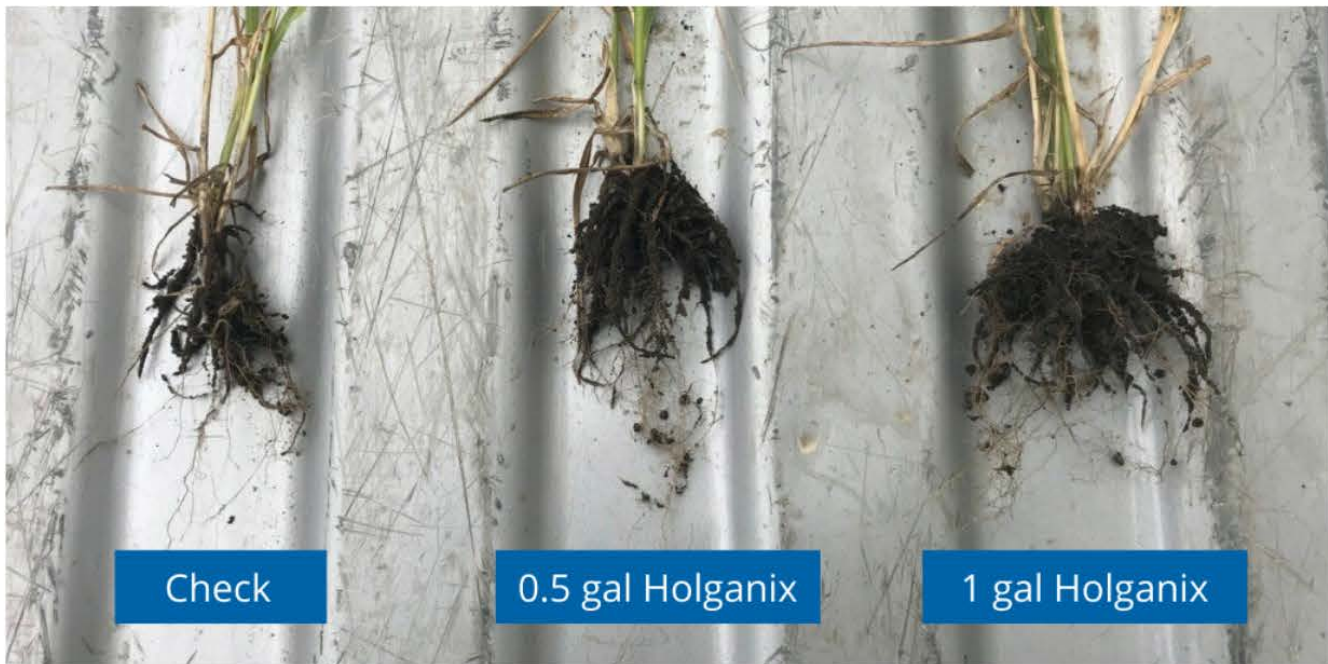
### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre in 15 gallons of water
App Timing:	5 days after planting
App Method:	Foliar
Other Products Used:	



# WINTER WHEAT, KANSAS

## Unsolicited Customer Photo



Organic winter wheat, photo taken May 12. Holganix Bio 800<sup>+</sup> applied one time, in the spring.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	As shown in picture
App Timing:	Spring application
App Method:	Foliar
Other Products Used:	

# WINTER WHEAT

## Third Party Research

Application	Spring Only		Fall Only		Fall & Spring	
Holganix Cohort	% +/- 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<sup>+</sup> performance on 5,000 acres of winter wheat across 37 locations, spanning 7 states from Oklahoma to Ohio.

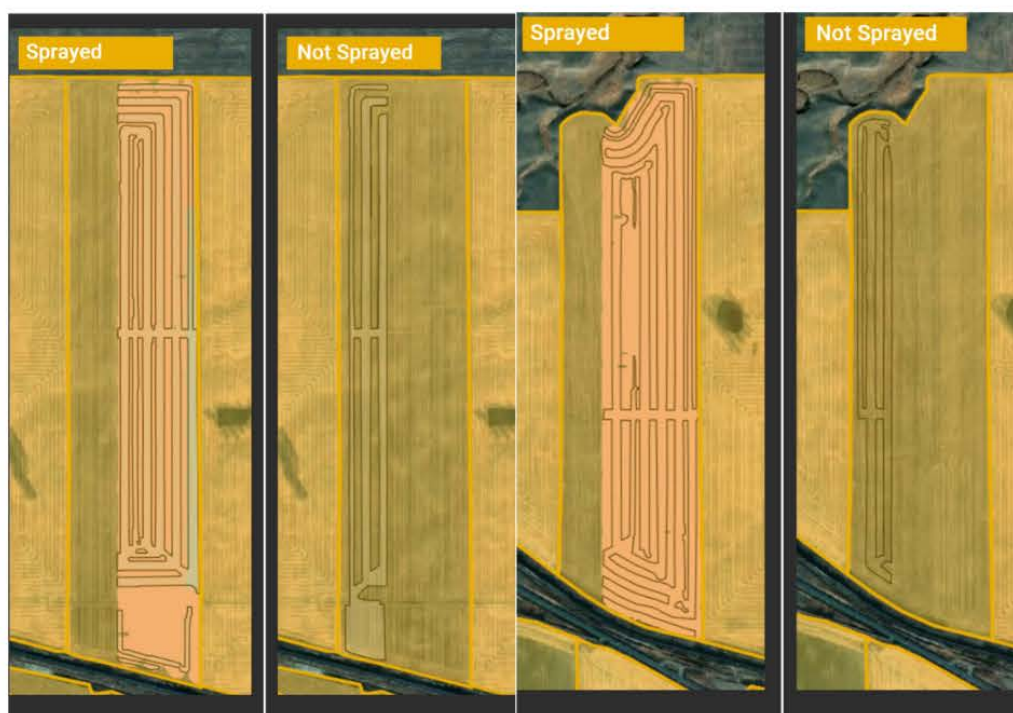
- Eight locations were treated with Holganix Bio 800<sup>+</sup> at 0.5 gallons per acre at planting in the fall. The fall treated locations saw 88% wins over the control.
- 24 locations received spring applications at 0.5 gallons per acre when the crop began growing again. The spring treated locations 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, MONTANA

## Unsolicited Customer Data



	Yield bu/acre	Return/acre*	Total acres
Holganix	47.29	\$283.72	58.72
Check	42.42	\$254.51	31.5
Holganix benefit	4.87	\$29.21	
Holganix	51.07	\$306.39	57.2
Check	46.69	\$280.15	19.96
Holganix benefit	4.38	\$26.24	

The data above is from two different fields but each time the treated and check were adjacent fields to one another. The rate is 0.5 gal per acre and was applied as a spring application.

\*\$6 per bushel price



# PRODUCE & SPECIALTY DATA

- Rate Recommendation: Varies depending on crop
- Key Results:
  - Higher yield
  - More extensive roots
  - Higher brix
  - Stronger plants

Several years of university and grower data have been compiled on Holganix Bio 800<sup>+</sup> on produce and specialty crops. The photos and testimonials enclosed are just a sample. For additional information please visit: [www.Holganix.com/Ag-data](http://www.Holganix.com/Ag-data)



Holganix Bio 800<sup>+</sup>



Holganix Bio 800<sup>+</sup>



# SWEET POTATOES, OKLAHOMA

## Unsolicited Customer Photos

These pictures were taken on September 23, 2021. The grower harvested over 1 lb. per square foot in yield. According to the grower, "I also saw a reduction in fertilizer. For larger areas, Holganix Bio 800<sup>+</sup> decreased the need for fertilizer, but in the garden beds, I was able to eliminate fertilizer. I could just use Holganix Bio 800<sup>+</sup> and still have thriving plants with a bountiful harvest."

"After about 6 weeks I had some disease issues, so I applied to the soil and foliar. Within a week, I had no more disease issues and really had no damage, as it seemed to have repaired the disease wilt that had occurred," explains the grower.

### Holganix Bio 800<sup>+</sup> First App:

Rate:	1 oz per gal of water
App Timing:	Soil prepping
App Method:	Foliar
Other Products Used:	His own microbial inoculants

### Holganix Bio 800<sup>+</sup> Second & Third App:

Rate:	8 oz per gal of water
App Timing:	At 6 weeks growing stage and fruiting stage
App Method:	Foliar
Other Products Used:	His own microbial inoculants





# POTATOES, NORTHEAST INDIANA

## Unsolicited Customer Photo

This picture was taken on August 2, 2021.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	1 gal per 200 square feet
App Timing:	Applied to the soil when first planted, then once mid-season, followed up with another application 2 weeks before harvesting.
App Method:	Foliar using hose-end sprayer
Other Products Used:	



Holganix Bio 800<sup>+</sup>



Holganix Bio 800<sup>+</sup>

## LEEKs, ONTARIO, CANADA

### Unsolicited Customer Photos

These photos were taken on October 25, 2021. The grower said he's "never seen such roots and leeks as this year." His garlic crop, which he's been growing for 10 – 15 years, "never better." "I put the Holganix on twice this year on both." He added, "usually pulling out garlic is much easier!" He had to use a shovel to remove the garlic (not heavy ground) and "never had such healthy and large plants."

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	One small spoonful
App Timing:	Planting
App Method:	In-furrow
Other Products Used:	





# DATIL PEPPER, FLORIDA

## Unsolicited Customer Photo

According to the grower, "After growing Datil's for 15 years, I have never seen a crop so beautiful with fruit so large." The grower reports that the Bio 800<sup>+</sup> crop has increased vigor and a heavier fruit set compared to the control.

### Horganix Bio 800<sup>+</sup> Treatment:

Rate:	2.25 gal per acre
App Timing:	Every other week
App Method:	Drip irrigation
Other Products Used:	50% less fertilizer used than the control





# SWEET PEPPER, INDIANA

## Unsolicited Customer Photo

According to the grower, "The high tunnel is 3,000 square feet but planted as if it were an acre. In other words, it's planted very tight. Results were terrific! I just pulled the pepper plant and the roots looked like they were trees."

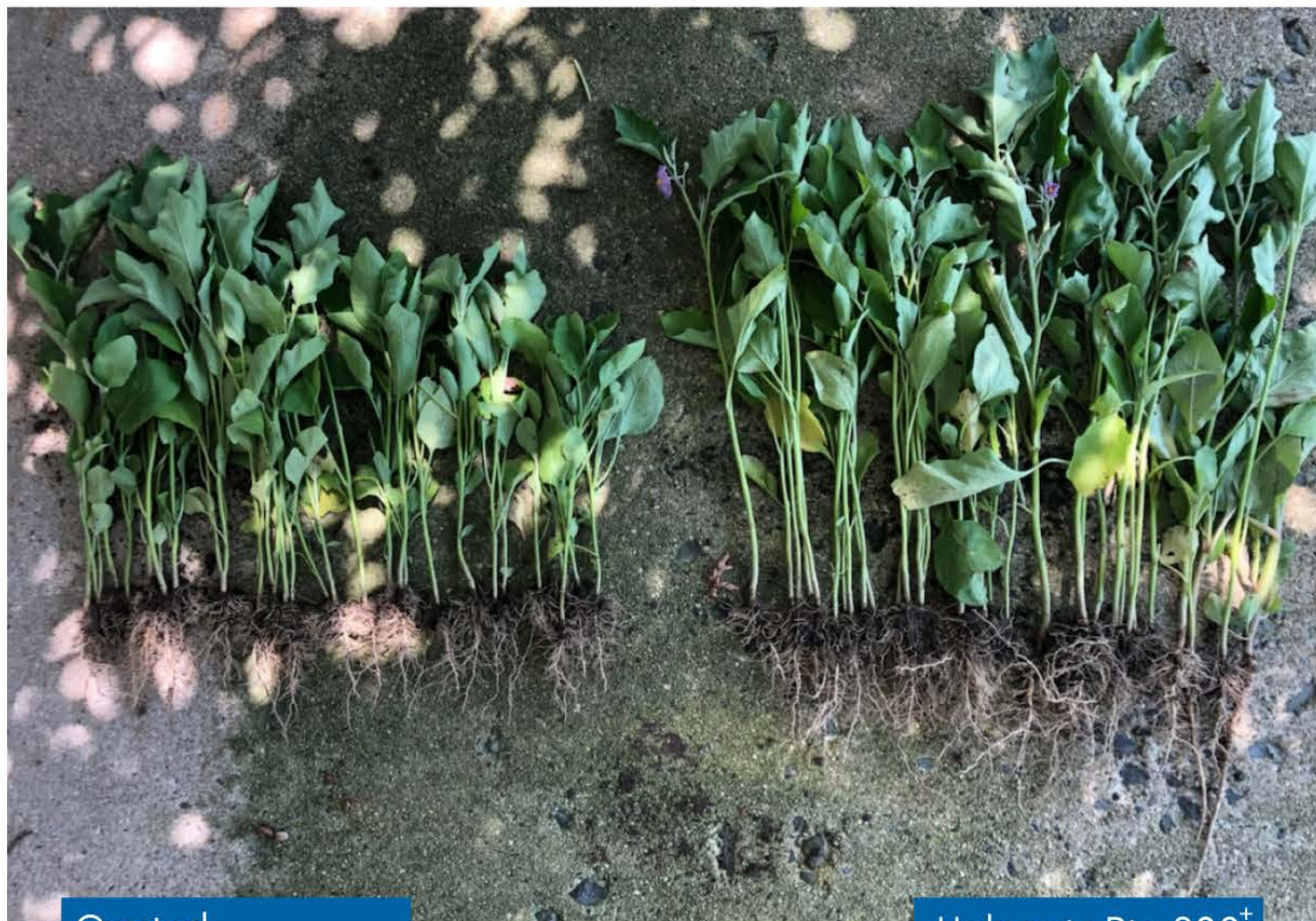
### Horganix Bio 800<sup>+</sup> First App:

Rate:	1.5 gals per acre
App Timing:	Applied when plants were very young
App Method:	Foliar
Other Products Used:	Standard inputs

### Horganix Bio 800<sup>+</sup> Second App:

Rate:	1 gal per acre
App Timing:	Two weeks after first app
App Method:	Drip
Other Products Used:	Standard inputs





Control

Holganix Bio 800<sup>+</sup>

# EGGPLANT, PENNSYLVANIA

## Research Grower Data

The Holganix Bio 800<sup>+</sup> treated crops were taller, had more and earlier flowering compared to the control and had more extensive roots than the control.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	2 ounces per gallon of water
App Timing:	Immediately after planting, second application four weeks later
App Method:	Drench over the planted row
Other Products Used:	All inputs were replicated in the control.





Controls

Holganix Bio 800<sup>+</sup>

# ONIONS, NORTH DAKOTA

## Unsolicited Customer Photo

The Holganix Bio 800<sup>+</sup> treated crop is larger and more developed than the control.





# PINTO BEANS, NORTH DAKOTA

## Unsolicited Customer Photo

This picture demonstrates Holganix Bio 800<sup>+</sup> at 0.5 gals per acre, at 1 gal per acre, compared to a control.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal and 1 gal depending on row
App Timing:	Post-emergence
App Method:	Foliar
Other Products Used:	All other inputs were replicated in the control.





# NAVY BEANS, NORTH DAKOTA

## Unsolicited Customer Photo

The photo above was taken on July 22, 2021. These beans were planted in 30-inch rows, irrigated, and grown using Holganix Bio 800<sup>+</sup>. The grower commented that these were some of the best beans he's seen.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	0.5 gal per acre
App Timing:	At planting
App Method:	In-furrow
Other Products Used:	Fertilizer 16-24-6





Control

Holganix Bio 800<sup>+</sup>

# CUCUMBER, KENTUCKY

## Unsolicited Customer Photo

The grower was able to harvest the Holganix Bio 800<sup>+</sup> crop earlier than the control, and the Bio 800<sup>+</sup> crop had a higher yield than the control.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	First application at 2 gal per acre, additional apps at 1 gal.
App Timing:	At planting, then apps at 4 & 8 weeks
App Method:	
Other Products Used:	



# PUMPKIN AND BUTTERNUT SQUASH

## NORTH DAKOTA

### Unsolicited Customer Photos

Holganix Bio 800<sup>+</sup>



Holganix Bio 800<sup>+</sup>

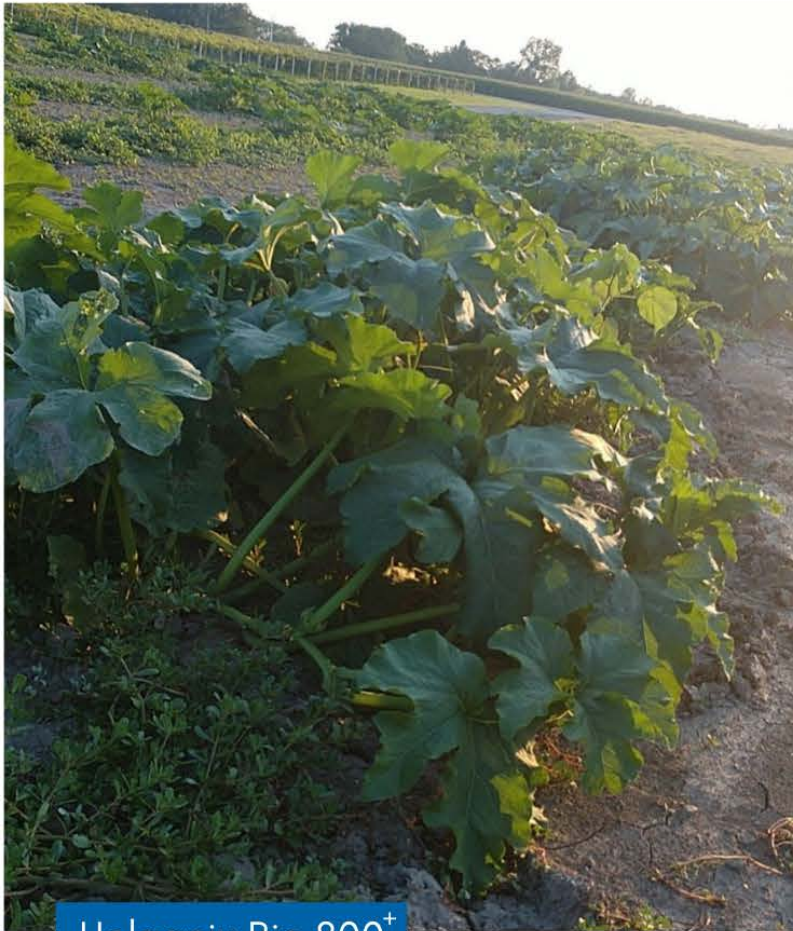


Photos were taken on July 26, 2021.

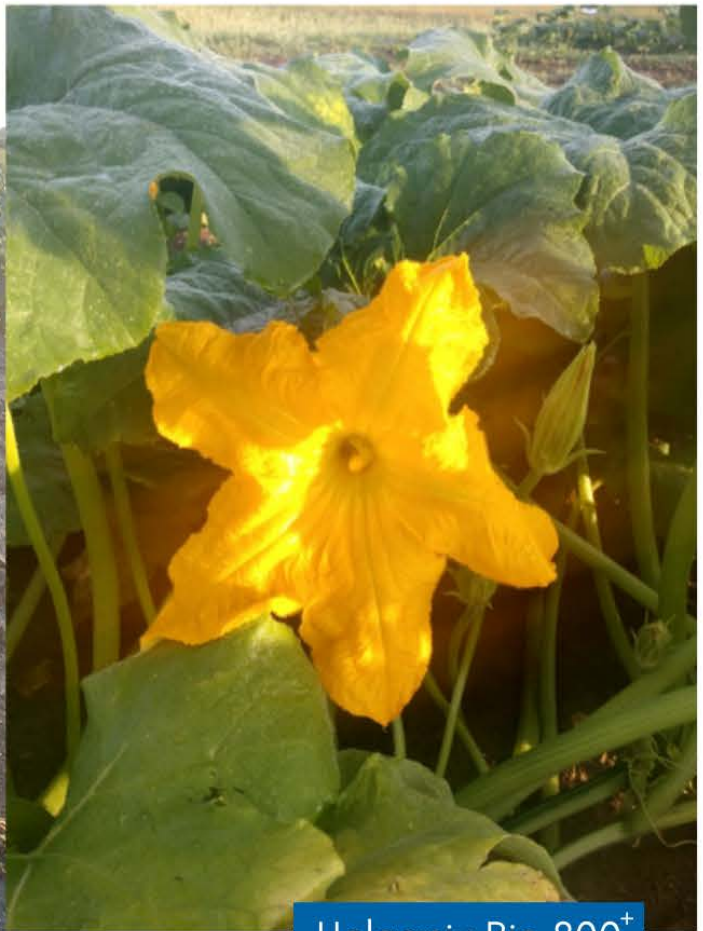
### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	16 oz per gallon of water
App Timing:	Every 2 weeks throughout the growing season
App Method:	Foliar
Other Products Used:	





Holganix Bio 800<sup>+</sup>



Holganix Bio 800<sup>+</sup>

# PUMPKIN, NORTHERN ILLINOIS

## Unsolicited Customer Photos

According to the grower, "the Holganix Bio 800<sup>+</sup> pumpkins are very vigorous with very large blooms and very big plants."

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	1.25 gal per acre in 20 gal of water
App Timing:	Emergence, with two additional apps
App Method:	Foliar
Other Products Used:	Herbicides





# LETTUCE & KOHLRABI, NORTHEAST INDIANA

## Unsolicited Customer Photos

Hydroponic lettuce and kohlrabi experiment. These pictures were taken on June 12, 2021. Note: The leaves of the plants pictured were already harvested once about 4 weeks prior.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	2 oz per gal of water
App Timing:	Applied twice over 6 weeks
App Method:	Watering can
Other Products Used:	

# BLUEBERRY, MICHIGAN

## Third Party Research Farm Data

	Avg. Weight/berry (g)	Brix/acid ratio
<b>July 27 pick</b>		
Check	1.62	17.8
Holganix	1.67	20.1
<b>August 10 pick</b>		
Check	1.16	24.9
Holganix	1.51	31.7

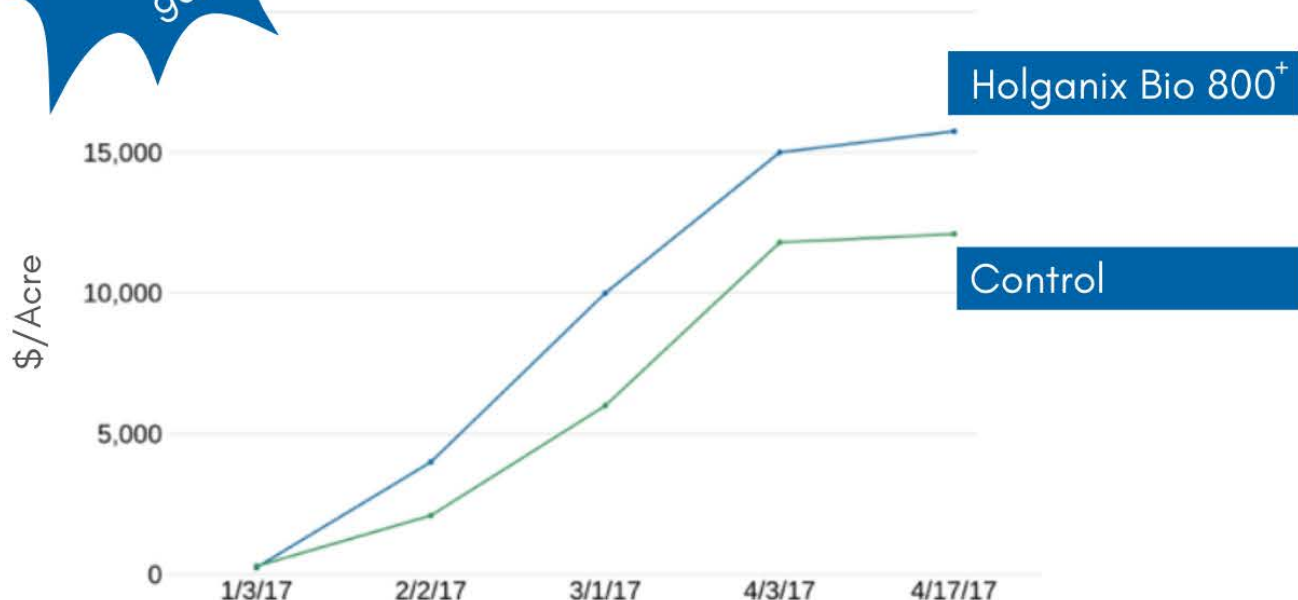
Each Pick date includes data from 5 locations across the farm; 5 reps per location

Each sample was 250 grams per rep

### **Holganix Bio 800<sup>+</sup> Tree & Shrub 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.





# STRAWBERRIES, CALIFORNIA

## Research Grower Data

In Ventura County, California, a researcher used Holganix Bio 800<sup>+</sup> 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<sup>+</sup> 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.



# WINE, MASSACHUSETTS

## Research Grower Data

Alfalfa Farm Winery reports a 55% average increase in yield in their Sevyal Blanc, Leon Millot and Marechal Foch. In addition, they report that their brix index has increased by an average of 26% compared to the control. According to the grower, "we are very excited to see how Horganix continues to promote the health of our grapes."

### Horganix Bio 800<sup>+</sup> 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





# TOMATOES, NORTHEAST INDIANA

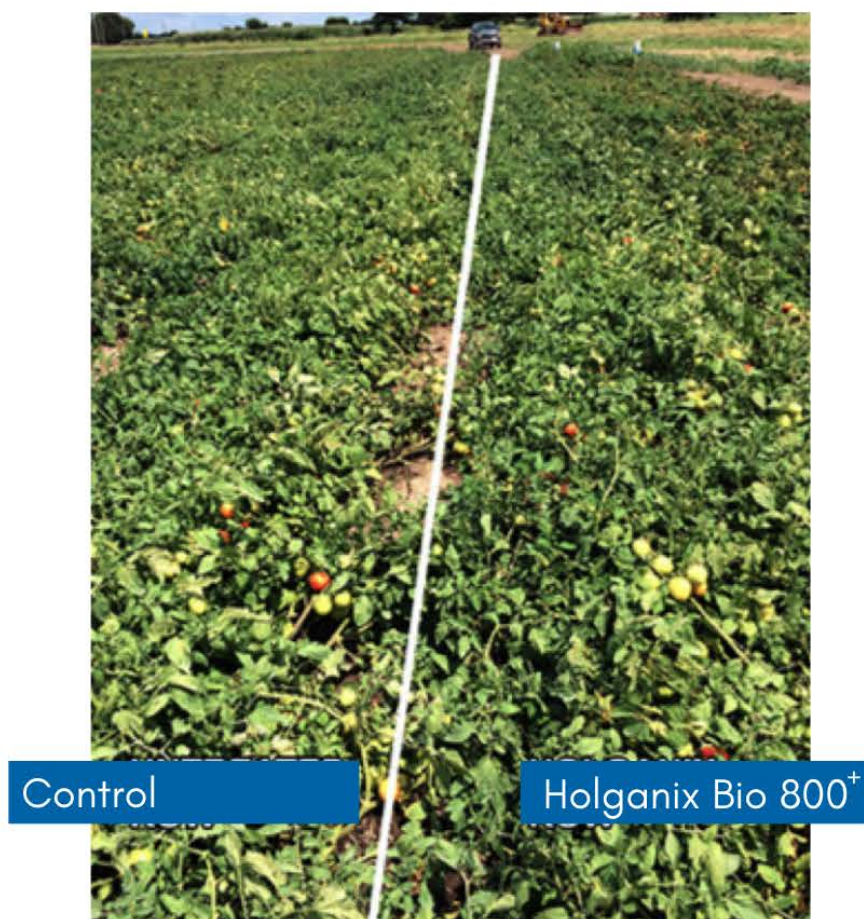
## Unsolicited Customer Photos

These tomatoes were planted from seed on April 5, 2021. The grower said, "almost killed me to dig it up to show the roots, but I am sure it will recover with another application of Holganix." The photo was taken on June 2, 2021.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	1 quart per gal of water
App Timing:	At transplanting, then another app midseason
App Method:	Foliar
Other Products Used:	Mixed in with his own fertilizers





# TOMATO, INDIANA

## Research Grower Data

According to the grower, "Bio 800<sup>+</sup> 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 Bio 800<sup>+</sup> used per acre." The grower used the product over 4 years on processing tomatoes and saw 2 to 4 tons per acre yield increases.

### Holgenix Bio 800<sup>+</sup> First App:

Rate:	2 gal per acre
App Timing:	At planting
App Method:	Foliar
Other Products Used:	Standard Inputs

### Holgenix Bio 800<sup>+</sup> Second & Third App:

Rate:	1 gal per acre
App Timing:	At 4 and 8 weeks after transplanting
App Method:	Foliar
Other Products Used:	Standard Inputs





# TOMATO, NORTHERN ILLINOIS

## Unsolicited Customer Photo

According to the grower, "The Holganix Bio 800<sup>+</sup> crops are very big and already setting tomatoes. I would say they are a good week ahead of the control."

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	1 quart per gal of water
App Timing:	At emergence, again when plant was 1 ft tall
App Method:	Foliar
Other Products Used:	





# TOMATO, MASSACHUSETTS

## Unsolicited Customer Photo

These tomatoes were grown in the ground in a greenhouse. The Holganix Bio 800<sup>+</sup> treated crops flowered two weeks earlier, the flowers were more profuse and they reached first fruit earlier than the control.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	2 oz per gallon of water
App Timing:	At transplanting
App Method:	Root dip
Other Products Used:	All other inputs were replicated in the control.



# PEACH ORCHARD, NORTH CAROLINA

## Unsolicited Customer Photos



Holganix Bio 800<sup>+</sup>

Lakeside Peach Orchard in North Carolina reports that, "Holganix Bio 800<sup>+</sup> helped with disease pressure, drought tolerance, brix index, and to achieve overall healthier trees. Notice the difference from the start to the current day. It's very impressive to see the amount of growth."

### Holganix Bio 800<sup>+</sup> Tree & Shrub Treatment:

Rate:	2.25 gals per 150 gals of water per acre
App Timing:	1 application every month
App Method:	Pull-behind sprayer
Other Products Used:	Holganix Blue Sky 21-0-0; Holganix Prebiotic 2-10-20; Bioherbicide to curb weeds





Control

Holganix Bio 800<sup>+</sup>

# GUAVA, FLORIDA

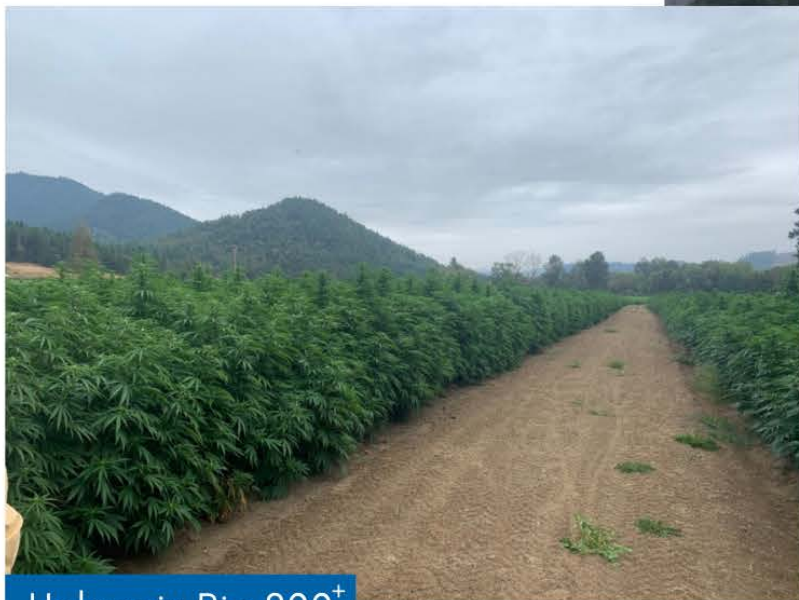
## Unsolicited Customer Photo

This grower has sandy and rocky soils. Notice the steep drop off in color between the Holganix Bio 800<sup>+</sup> treated crop and the control.

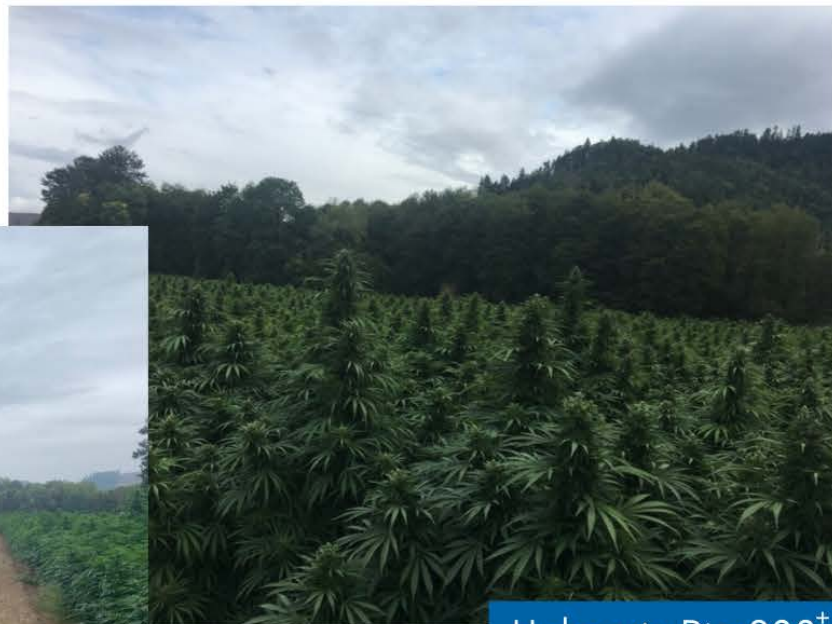
### Holganix Bio 800<sup>+</sup> Tree & Shrub Treatment:

Rate:	2.25 gal per 100 gal of water
App Timing:	1 application every 3 months
App Method:	Soil drench
Other Products Used:	All other inputs were replicated in the control.





Holganix Bio 800<sup>+</sup>



Holganix Bio 800<sup>+</sup>

## HEMP, OREGON

### Unsolicited Customer Photos

All crops were treated with Bio 800<sup>+</sup>. The grower saw 3.2 to 4.1 lbs of flower per plant compared to neighboring fields that saw 2.2 pounds. The grower also saw an 18 to 21% oil yield and only a 0.01% loss after transplant. Please note that this is higher than our standard rate. For this grower, his ROI on yield far outweighed the cost of the product.

#### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	2.25 gallons per acre
App Timing:	Weekly
App Method:	Injection/drip tape
Other Products Used:	15-15-15 Fertilizer



# SUNFLOWER, NORTHEAST INDIANA

## Unsolicited Customer Photo

According to the grower, "The plants are over 12 feet tall with an amazing amount of flowers. The roots are amazing; even have adventitious roots forming on the stalks which I've never seen before." The photo was taken on July 25, 2021.

### **Holganix Bio 800<sup>+</sup> Treatment:**

Rate:	200 gals of water to 1 gal of Bio 800 <sup>+</sup> mixed in with his fertilizer program
App Timing:	Total three applications throughout the growing season
App Method:	Foliar
Other Products Used:	Mixed with grower's own fertilizers





Control

Holganix Bio 800<sup>+</sup>

Control

# TREE NURSERY, NEW YORK

## Unsolicited Customer Photo

The picture was taken in 2018 in late summer when temperatures were both hot and dry. The red maple trees were bare root planted in the spring of 2018. The trees that were treated with Bio 800<sup>+</sup> are a foot larger in growth and a 30% larger caliber.

### Holganix Bio 800<sup>+</sup> Tree & Shrub Treatment:

Rate:	3.5 ounces per tree
App Timing:	At planting
App Method:	Soil drench
Other Products Used:	



Holganix Bio 800<sup>+</sup>



Holganix Bio 800<sup>+</sup>

# NATIVE GRASS SEED PRODUCTION, CALIFORNIA

## Unsolicited Customer Photos

After using Holganix Bio 800<sup>+</sup> for 4 years, "our soil has improved, and we are happy with the yields in fields treated with Holganix versus the control".

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	1 gal per acre
App Timing:	Once a year in fall before planting
App Method:	Soil injection near seedlings
Other Products Used:	Mixed with 8-24-6 liquid fertilizer



# PASTURE, ALABAMA

## Unsolicited Customer Photos

Control



Control



Holganix Bio 800<sup>+</sup>



Holganix Bio 800<sup>+</sup>

All four photos were taken in the same field. The top two were seeded with fescue mix and no fertilizer or weed control. The bottom two are seeded with fescue mix and two applications of Holganix Bio 800<sup>+</sup>.



# GOLF GREEN, NEVADA

## Unsolicited Customer Photo



"From a one and a half inch root net on greens to a six inch root net!"



# LAWN, NORTHEAST INDIANA

## Unsolicited Customer Photos



Top, seeded 3 weeks prior, watered daily  
Bottom, seeded 2 weeks prior, Holganix Bio 800+ at seeding and watered daily



Seed covered with straw after planting on both lawns.

### Holganix Bio 800<sup>+</sup> Treatment:

Rate:	7 oz per 1,000 sq. ft.
App Timing:	Right after seeding
App Method:	Hose-end sprayer
Other Products Used:	

