

Created by Holganix™

At Holganix, our mission is to Revolutionize the Way the World Grows. Our commitment extends to the way you grow your business, your team and of course your plants.

With a focus on biology as the solution to plant health, Holganix is continually pioneering new methods of incorporating microorganisms, microbe food and nutrient enhancers to build resilient plants and healthier soils.

Why does biology matter? Plant health begins with the soil. Having healthy soil creates a happy plant. The soil ecosystem when complete, acts as an ideal habitat for the plant, feeds the plant with nutrients, defends the plant from pathogens and increases the plant's ability to perform under stress. That's why caring for plant health and soil health are synonymous.

Our flagship product line, Bio 800⁺ provides a complete ecosystem in a bottle, containing over 800 species of beneficial microorganisms, microbe food and nutrient enhancers. It's changing the soil at a fundamental level and building a support system for your plant that's going to mean huge improvements in plant resilience.

As our company evolved, so have our product lines. PB1, PreBiotic Fertilizer and ProBiotic Fertilizer all nurture plant and soil health in their own, unique way.

When used in combination with one another, the Holganix product lines nourish the soil and your plants. The result? As green industry professionals, you have the tools to do your best work and to grow the most beautiful plants possible.

Thank you for your support! With Gratitude.

Barrell Errel

Barrett Ersek Founder and CEO **Holganix**



Bio 800+

Delivers Abundant, Diverse Microorganisms Pages 1 - 8











PB₁

3

5

6

Delivers Targeted Microorganisms
Pages 9 - 12





PreBiotic Fertilizer

Delivers Nutrients And Microbe Food Pages 13 - 16











ProBiotic Fertilizer

Delivers Nutrients And
Microorganisms
Pages 17 - 20









Recommended Programs

Products to Consider When Building Programs Pages 21 - 24

RADs, Refrigerators + Equipment

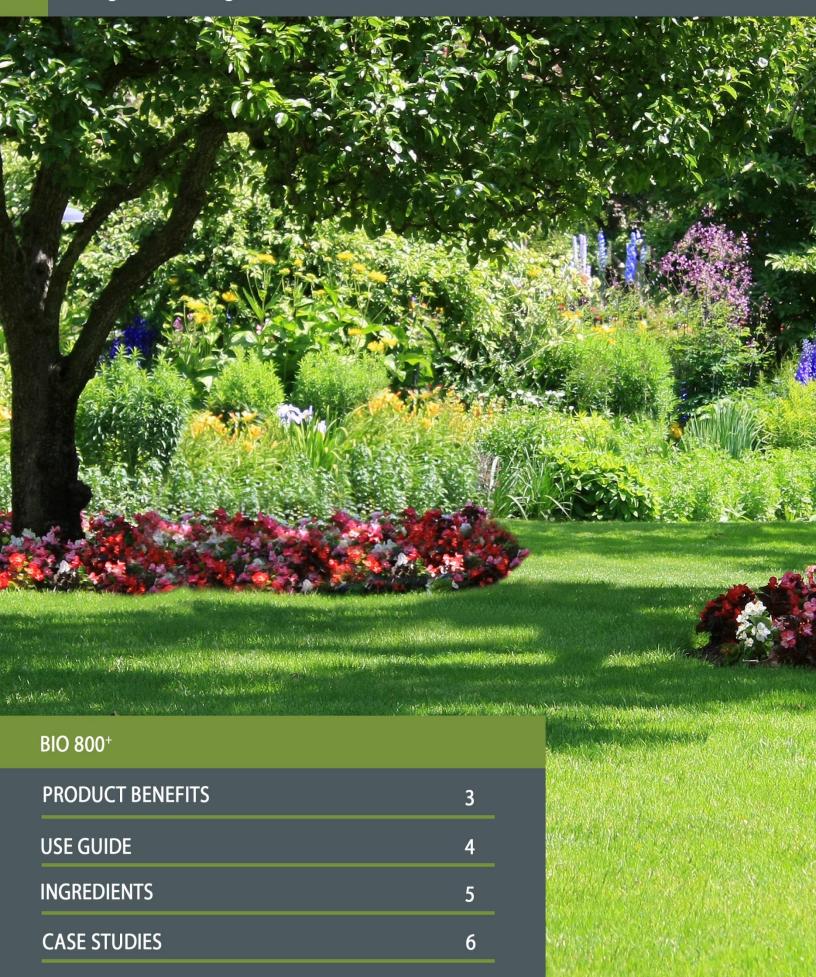
Storing And Using Bio 800⁺ Pages 25 - 31







Holganix™ Catalog: Bio 800+









Bio 800⁺ products provide the complete ecosystem of mircoorganisms needed for soil and plant health. Containing over 800 species of beneficial microorganisms, microbe food and nutrient enhancers, Bio 800⁺ is changing the soil at a fundamental level to build strong roots and resilient plants.

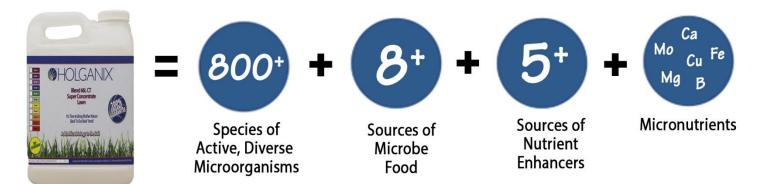
Bio 800⁺ products are 100% organic and are both *university and field-tested* to deliver optimal plant performance while using fewer fertilizers, pesticides and water.







What's in a jug of Bio 800+?



Key Benefits of The Bio 800+ Product Line

The active community of microorganisms in Bio 800⁺ create healthy soils that feed the plant with nutrients, defend the plant from pathogens and increase the plant's ability to perform under stress.

Plant Resilience, Increasing Tolerance
 Root Depth and Density
 Soil Health
 Reduce Inputs: Fertilizer, Pesticides and Water

Bloom Benefits

Boosts color and size

Reduces transplant shock

Tree and Shrub Benefits

Reduces transplant shock
Increases vibrancy of foliage

Golf Benefits

Reduces thatch and recovery time

Increases playability

Lawn Benefits

Differentiates your business from

the competition

Reduces surge growth

Agriculture Benefits

Increases yield

Boosts brix index



Active Microorganisms

Bio800⁺: Patented green compost extract from one of 11 climate zones across the U.S. Containing 296 genera, 800+ species of microorganisms that foster a diverse soil ecosystem.

Plant Growth Promoting Bacteria (PGPB): Breaks down organic matter, solubilizes nutrients and displaces pathogens.

Trichoderma Fungi: Colonizes roots, attacks fungi, induces the plant's natural defense system.

Penicillium Fungi: Breaks down organic matter, releases organic acids and nutrients.

Endo and EctoMycorrhizae: Assists with water, mineral and nutrient uptake.

Nitrogen-Fixing Bacteria: Aids in the nitrification process, making nitrogen available from the atmosphere and soil.

Beneficial Nematodes: Eats microorganisms and excretes nutrients to the soil.

Protozoa: Eats bacteria and releases nutrients to the soil.

Sources of Microbe Food

Gluten: A nitrogen (N) source.

Saccharomyces Cerevisiae: Aids in rooting and serves as a food source for microorganisms in the soil.

Auxins: A plant growth hormone positively affecting cellular growth and differentiation.

Kelp: Stimulates uptake of nutrients, promotes seed germination and plant cell division.

Yucca Extract: A natural spreader-sticker, wetting agent and soil conditioner.

Sources of Nutrient Enhancers

Humic and Fulvic Acids: Supports respiration of microorganisms in the soil, enhances seed germination, promotes root development and absorption of micronutrients.

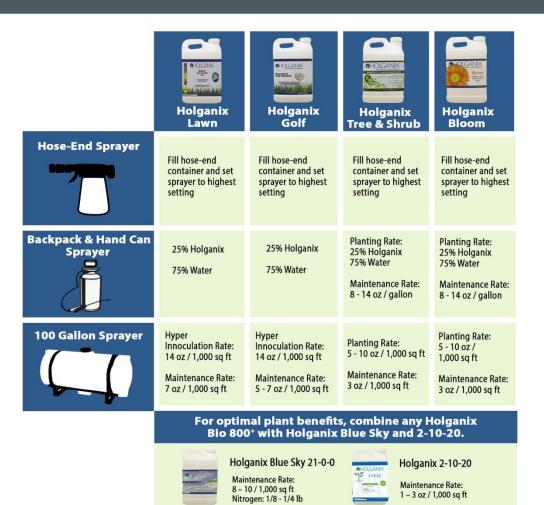
Amino Acids: Building blocks of proteins and a nitrogen sources for plants, essential for cell division and growth.

Kelp: See description above.

Plant Growth Promoting Bacteria: See description above.

Visit: www.Holganix.com/Ingredients for additional ingredient info





Best Practices

Holganix Bio 800⁺ **products:** A 0-0-0 analysis and should be combined with reductions in nutrients for optimal results.

Sprayer Screen Size: 20 mesh or larger.

Sprayer Volume: Minimum 1.5 gal / 1,000 sq ft

Annual Application Goal: 28 – 42 oz / 1,000 sq ft depending on growing

season.

Hyper Inoculation Rate: First-time applications should use a hyper inoculation rate to jump start initial biological activity. The hyper inoculation rate is double the maintenance rate.

Over Applying Encouraged: It's impossible to over apply Bio 800⁺ unless treating planters. When treating planters use the recommended rate.

Refrigeration: Holganix Bio 800⁺ is a living product. To ensure product is fresh, and microorganisms remain dormant, store in a refrigerator between 33° and 44°. Bio 800⁺ can be stored at room temperature up to 48 hours.





Before using Holganix Lawn and fertilizer in early spring.



After using Holganix Lawn and fertilizer in the fall.



Entrepreneurs: Caleb Ault and Josh Bryan

Lawn Care Company: UltraGreen Lawn Care Location: Arkansas, Tennessee and Florida

After using Holganix Lawn, Caleb and Josh both became huge Holganix enthusiasts.

Three key results:

- 1. Less Disease Pressure: "We've seen 50% less disease pressure than in previous years despite reducing fungicides," reports Caleb.
- 2. Greener, Healthier Lawns: Caleb and Josh report that their lawns have stayed greener longer and the turf also appears thicker.
- 3. It's all about the money: According to Josh, "We've seen a 15-20% savings in material cost." UltraGreen has also experienced less callbacks because of an overall increase in turf health.

Superintendent: Paul B. Latshaw
Golf Course: Muirfield Village Golf Club
Location: Dublin, OH
Notable: Named Number 15 on Golf Digest's Top
100 Courses in America in 2015

"I think one of the biggest benefits of Holganix Golf is root depth and density," says Paul B. Latshaw. "We started seeing a big rooting benefit in 2013." Between the Memorial and President's Cup, Paul increased a green by 40 yards in length and added two acres of undisturbed turf area.

On August 13, 2013, 45 days before the President's Cup, sod was installed. "The first thing we did was apply Holganix Golf."

By September 13, the renovation looked fantastic. "I've never been able to get sod established this quickly, especially at such a difficult time of year. Holganix Golf really helped. We had no issues going into the President's Cup."



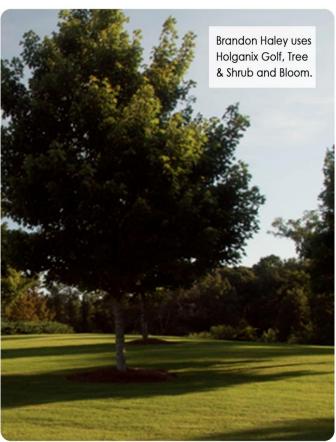
Entrepreneur: Denny Bengert
Greenhouse: Bengert Greenhouses
Location: West Seneca, New York
Notable: Bengert Greenhouses has 40 years
in the business!

"When it comes to snake oil, I've seen it all!" states Denny. "Unlike those snake oil products, Holganix Bloom really does work!"

According to Denny, "Holganix Bloom places me in a better position to sell something lush."

Three Key Results:

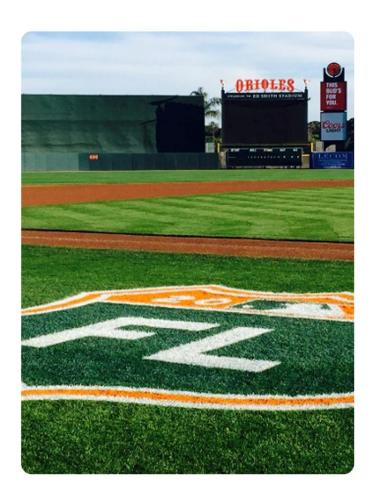
- 1. Reducing Fertilizers: Denny reports reducing his fertilizers by 10 15% with Holganix Bloom.
- 2. Reducing Fungicides: "We've used less fungicides than ever before." So far, Denny has cut fungicides by 30%.
- 3. Development of the plant: Development of the plant has improved, allowing the plant to mature earlier and stay in peak conditions longer.



Head Grounds Keeper:
Brandon Haley
Campus: Red Diamond Tea and Coffee
Location: Moody, Alabama
Notable: Named PGMS Green Star Award for
Sustainability

"I won't plant anything on our property without Holganix Products," states Brandon. What has Brandon REALLY seen with Holganix Golf, Tree and Shrub and Bloom?

- Reducing Irrigation: "We cut irrigation by 75% over the last 3 years. Holganix has contributed because our roots are so deep, I am able to go extra days without watering."
- 2. Reducing Fertilizers: Brandon cut nitrogen from 3.3 lbs in 2014, to 2.4 lbs in 2015 and finally to 1.9 lbs in 2016.
- 3. Enhancing Rooting: "Rooting results have floored me!" says Brandon who reports a 29-inch root, the largest in Holganix records to date.





Dan started applying Holganix Golf in 2014 after being referred by a friend at the Pittsburgh Pirates.

"It took a few months to really notice a huge difference when using Holganix Golf." But, with Holganix Golf, "the health of my turf is remarkable!"

What's the dirt on Dan's Holganix results?

- 1. Nitrogen Fertilizer: 40% reduction.
- 2. Irrigation: 50% reduction. From 1 hour each day to 30 to 35 minutes each day.
- 3. Seeding Reductions: 75% reduction in needed seed.





Jeremy applied Holganix Lawn and Blue Sky 21-0-0 after aeration and overseeing with Rye Fescue.

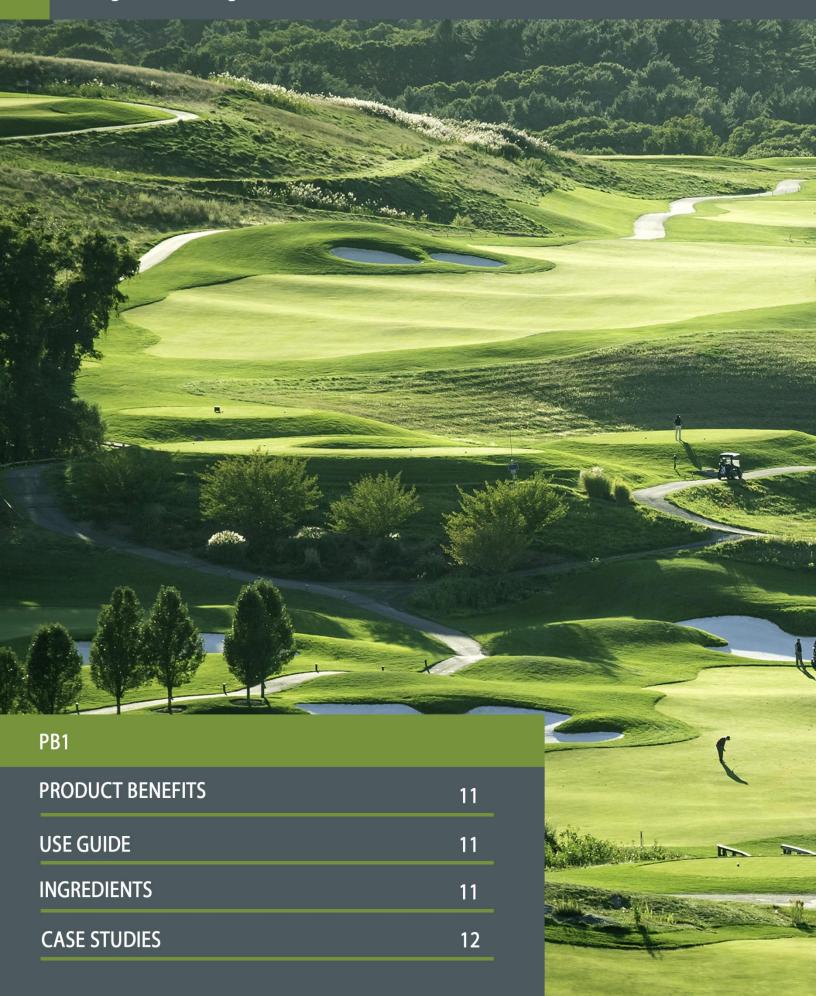
The original turf type was Bermuda and the property primarily consisted of highly disrupted soil due to a recent renovation.

Eight days later, the seed had germinated and new growth can readily be seen.

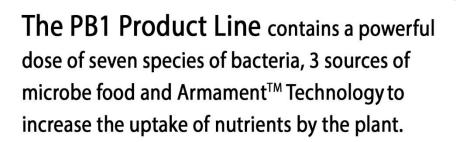
Traditionally, it would have taken Jeremy 14 days to see germination results.



Holganix™ Catalog: PB1







Get the most out of your fertility program while nurturing plant health through our PB1 Product Line.



What's in a jug of PB1?



= 7

Species of Bacteria + 9

Species of Mycorrhizae (Only in PB1 Golf) 3

Sources of Nutrient Enhancers Including: Armament™ Technology 9

Sources of Microbe Food.

PB1 Golf 2-0-0

- **↑** Nutrient Uptake
- **↑** Plant Resilience
- Root Depth and Density Due to Mycorrhizae

PB1 LTO 4-0-2

- Nutrient Uptake
- **↑** Color Response
- Plant Resilience

Use Guide



GOLF

Inoculation Rate - 6 oz / 1,000 sq ft Maintenance - 3 oz / 1000 sq ft Apply monthly throughout the growing season

LAWNS

Inoculation - 3 oz / 1000 sq ft Maintenance - 2 oz / 1000 sq ft Apply monthly throughout the growing season

TREES AND SHRUBS

Add 64 to 128 oz per 100 gal water Apply directly to soil and/or spray on plants every 2 to 4 weeks



Entrepreneur: Rick Ritenour
Lawn Care Company: Ritenour Custom
Lawn Care
Location: Pittsburgh, PA

"I like to do things differently and I think that biological products are the way of the future," says Rick Ritenour of Ritenour Custom Lawn Care.

But for Rick, convenience was extremely important. That's why he was drawn to PB1 LTO.

Overall, Rick has seen two key benefits:

- 1. A pop of green when combined with his fertilizer program.
- 2. Faster seed germination when applying PB1 LTO to his aeration and overseeding program.



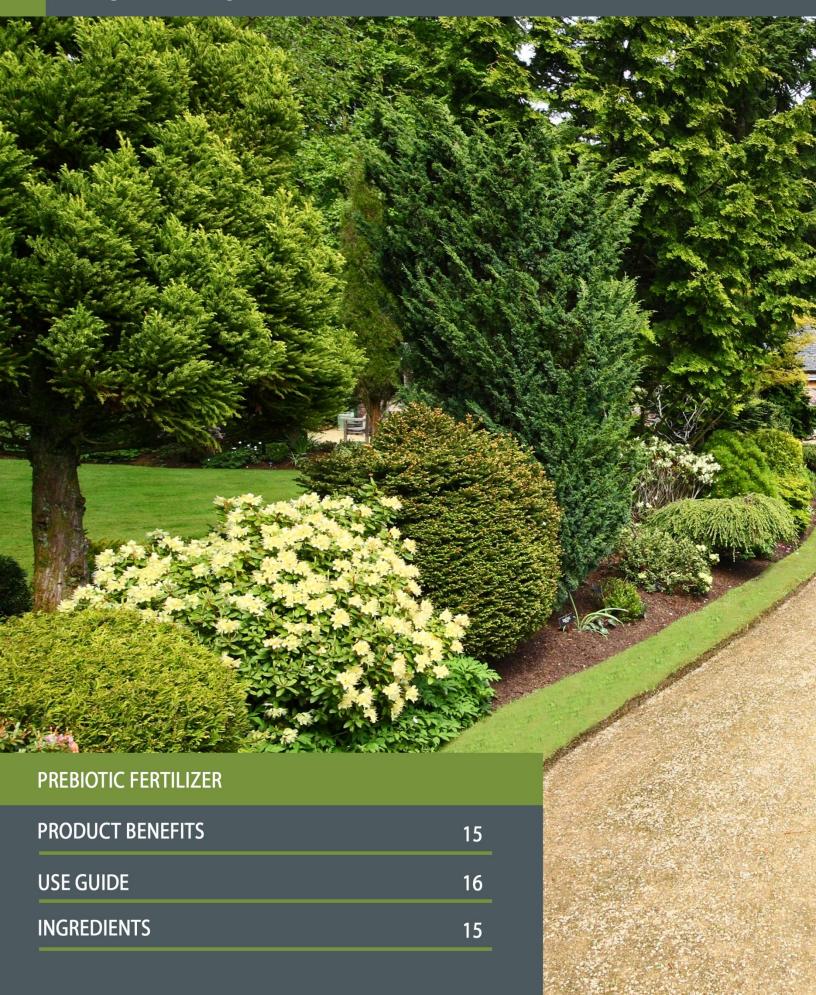
Superintendent: Josh Adams
Golf Course: Woodhaven Country Club
Location: Louisville, KY

"If you aren't using PB1 Golf, you are missing out. I've seen healthier turf because of an increase in root density. When you have healthy roots, you have healthy turf," says Josh of Woodhaven Country Club.

What are Josh's favorite benefits?

- 1. "We've seen 4 6 inch roots all season long."
- 2. Reduced disease pressure.
- 3. Increased playability with firmer greens and less ball marks.

Holganix™ Catalog: PreBiotic Fertilizer





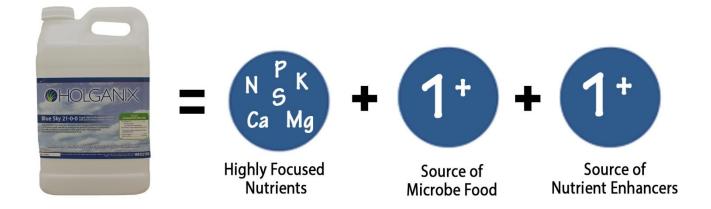


PreBiotic Fertilizers are powerfully efficient liquid nutrients combined with microbe food and nutrient enhancers.

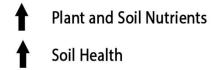
Because PreBiotic Fertilizers contain microbe food, they function as the perfect compliment to the Bio 800⁺ and PB1 Product Lines.



What's in a jug of PreBiotic Fertilizer?



Key Benefits of PreBiotic Fertilizer







HOLGANIX FLOWER 0-3-7

Promotes flowering

Includes Armament™ to boost nutrient uptake

HOLGANIX GROW 2-2-7

Nurtures growth in young plants

Includes Armament to boost nutrient uptake

HOLGANIX CALMAG 2-0-0

Extends results throughout the season

Increases color response

Includes Armament™ to boost nutrient uptake

HOLGANIX 2-10-20

Grows shoots and roots

Includes Armament™ to boost nutrient uptake

HOLGANIX 21-0-0

Extends results through the season

Increases color response





- Use Holganix Blue Sky 21-0-0 and Holganix 2-10-20 in combination with Bio 800⁺ and/or PB1 products.
- All plants have different nutritional requirements, use the chart above as a guide.

Week	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Product	VEGETATION	VEGETATION	VEGETATION	VEGETATION	TRANSITION	FLOWER	FLOWER	FLOWER	FLOWER	FLOWER	FLOWER	
Holganix Grow	5 ml	7.5 ml	15 ml	15 ml	7.5 ml	5 ml						H2O FLUSI
Holganix Flower					7.5 ml	7.5 ml	10 ml	15 ml	15 ml	15 ml	15 ml	H2O FLUSI
Holganix CALMAG	5 ml	7.5 ml	15 ml	15 ml	15 ml	15 ml	15 ml	15 ml	15 ml	15 ml	15 ml	H2O FLUS
Holganix Bloom	60 ml	120 ml	120 ml	90 ml	90 ml	90 ml	90 ml	H2O FLUS				

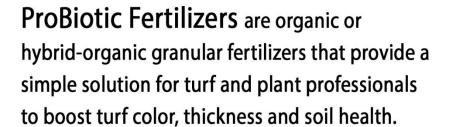
- Amounts in ML/Gallon of Water.
- 12 week flowering cycle.
- Use Holganix Bloom throughout entire program.
- All plants have different nutritional requirements, use the chart above as a guide.

Holganix™ Catalog: ProBiotic Fertilizer







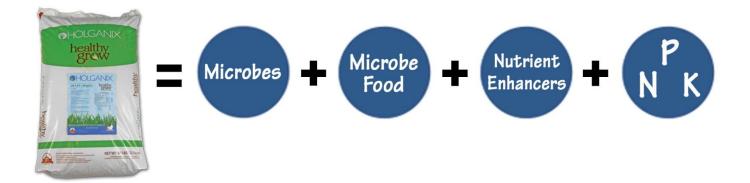


Our ProBiotic Fertilizer embodies a synergistic relationship between high-quality Aerobically Composted Chicken Manure (ACCM) Fertilizer with microorganisms from Bio 800⁺.





What's in a Bag of ProBiotic Fertilizer?



Healthy Grow Infused with Holganix

Root Depth and Density

Green, Thick Turf

♦ Soil Health

Inputs: Nutrients, Water and Pesticides

100% Organic Analysis:

- 2-4-3
- 5-2-3

Hybrid-Organic Analysis:

- 7-9-5
- 10-3-2

Use Guide

PRODUCT	RATE	POUNDS OF NITROGEN
Healthy Grow Infused Holganix 2-4-3	Apply 5-10 lbs/1000 sq ft	.12
Healthy Grow Infused Holganix 5-2-3	Apply 6.25-12.5 lbs/1000 sq ft	.363
Healthy Grow Infused Holganix 7-9-5	Apply 3.5-7 lbs/1000 sq ft	.255
Healthy Grow Infused Holganix 10-3-2	Apply 3.4-4.6 lbs/1000 sq ft	.3446

Apply to dry turf. Always calibrate spreader to ensure proper application. Irrigate to move product down into the turf canopy before mowing.

^{*}Custom Formulations, Combo Products and Control Products Available With Biodac Carrier.





"We use both Healthy Grow Infused with Holganix 10-3-2 and Holganix Lawn," says Justin. Vivid Lawn has been using Holganix products since the Spring of 2014.

Overall, Justin says, "The lawns are thick and the roots look great. Plus, our customers love that we reduce our use of fertilizers and pesticides."

"One of my favorite times to use Healthy Grow Infused with Holganix is during seed germination and aeration in the fall. We've seen a HUGE increase in seed germination with the 7-9-5."



Landscape Technician:
Nick Miller
Lawn Care Company:
Grasshopper Property Maintenance
Location: Millersburg, OH

Nick has been in charge of lawn fertilization at Grasshopper Property Maintenance in Ohio since 2013. Grasshopper uses Holganix Lawn, Holganix Tree and Shrub and several different analyses of the Healthy Grow Infused with Holganix product.

During a renovation project at his own house, he used a combination of Healthy Grow Infused with Holganix, Holganix Lawn and Foliar Pak.

It didn't take long for the turf to grow in thick and green. He's seen great root development and reports that the turf is recovering quickly after stress from traffic or weather.

"I love the source of carbon and nitrogen with Healthy Grow Infused with Holganix. It's a great product," says Nick.

Holganix™ Catalog: Recommended Programs





Whether you aim to create perfect turf before a championship tournament, incorporate organic methods to achieve optimal plant health or are looking for

achieve optimal plant health or are looking for a simple solution to using biological products, Holganix has solutions for you.

The following pages detail product combinations to consider when building programs for turf and plant health care professionals. They are recommended guides. For a customized program to fit your turf and soil type, budget and agronomic goal, call 866-56-EARTH.





Products to Consider When Building Programs for Turf Professionals

TURF PERFORMANCE

Product	Rate/1000 sq ft
Bio 800+ Golf/Lawn	7 oz
PB1 Golf/LTO	3 oz
Blue Sky 21-0-0	8-10 oz
2-10-20	1-3 oz

\$\$\$
\$\$\$
144
14
14
141
14

MICROBE BUILDER

Product	Rate/1000 sq ft
Bio 800+ Golf/Lawn	7 oz
Blue Sky 21-0-0	8-10 oz
2-10-20	1-3 oz

Cost:	\$
Microbe Diversity:	
Nutrient Uptake:	*
Plant Resilience:	*
Root Health:	*
Soil Health:	**
Simple To Use:	*

CONVENIENT BIOLOGY

Product	Rate/1000 sq ft
PB1 Golf/LTO	3 oz
Blue Sky 21-0-0	10 oz
2-10-20	3 oz

Cost:	\$\$
Microbe Diversity:	1
Nutrient Uptake:	11
Plant Resilience:	11
Root Health:	11
Soil Health:	1
Simple To Use:	**

GRANULAR CARBON PUSHER

Product

Healthy Grow Infused With Holganix

2-4-3 5-2-3 7-9-5 10-3-2

Cost: \$\$
Microbe Diversity:
Nutrient Uptake:
Plant Resilience:
Root Health:
Soil Health:
Simple To Use:
\$\$

For additional use directions, visit "Use Guide" under desired product. These are basic recommendations. For a customized program to fit your turf and soil type, budget and agronomic goals, call (866-56-EARTH).

Products to Consider When Building Programs for Flowers, Trees and Shrubs

PLANT PERFORMANCE

Product	Rate/1000 sq ft
Bio 800+ T&S/Bloom	5-10 oz
PB1 LTO	3 oz
Blue Sky 21-0-0	8-10 oz
2-10-20	1-3 oz

Cost: \$\$\$
Microbe Diversity: ***
Nutrient Uptake: ***
Plant Resilience: ***
Root Health: ***
Soil Health: ***
Simple To Use: ***

MICROBE BUILDER

Product	Rate/1000 sq ft
Bio 800+ T&S/Bloom	5-10 oz
Blue Sky 21-0-0	8-10 oz
2-10-20	1-3oz

INSTALLATION PROTECTION

Product	Rate/1000 sq ft
Bio 800+ T&S/Bloom	3 oz
Blue Sky 21-0-0	8-10 oz
2-10-20	1-3 oz

Cost: \$
Microbe Diversity:
Nutrient Uptake: Plant Resilience: Root Health:
Soil Health:
Simple To Use: \$

4 - PART GARDEN PROGRAM

Week	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
*ML/gal water												
Product	VEGETATION	VEGETATION	VEGETATION	VEGETATION	TRANSITION	FLOWER	FLOWER	FLOWER	FLOWER	FLOWER	FLOWER	
Holganix Grow	5 ml	7.5 ml	15 ml	15 ml	7.5 ml	5 ml						H2O FLUS
Holganix Flower					7.5 ml	7.5 ml	10 ml	15 ml	15 ml	15 ml	15 ml	H2O FLUS
Holganix CALMAG	5 ml	7.5 ml	15 ml	15 ml	15 ml	15 ml	15 ml	15 ml	15 ml	15 ml	15 ml	H2O FLUS
Holganix Bloom	60 ml	120 ml	120 ml	90 ml	90 ml	90 ml	90 ml	H2O FLUS				

Cost: \$
Microbe Diversity: **
Nutrient Uptake: *
Plant Resilience: *
Root Health: *
Soil Health: *
Simple To Use: *

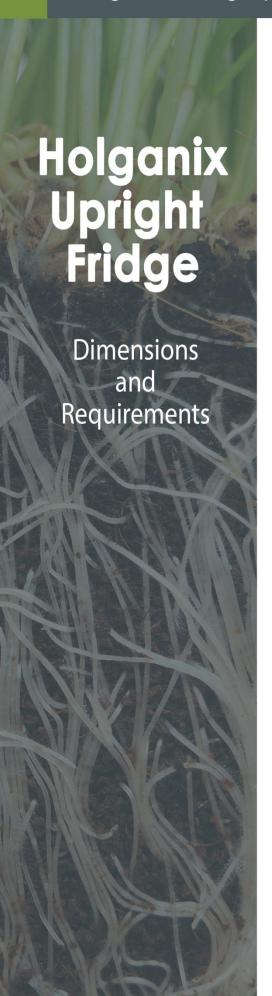
For additional use directions, visit "Use Guide" under desired product. These are basic recommendations. For a customized program to fit your turf and soil type, budget and agronomic goals, call (866-56-EARTH).

Holganix™ Catalog: Equipment







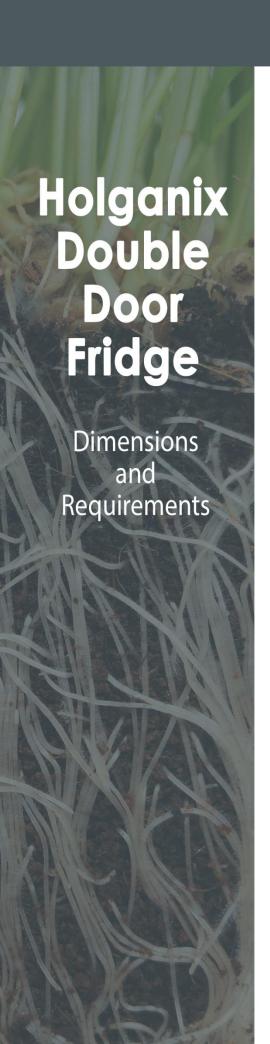




- 110 (20AMP) electrical circuits with outlets within 5ft from unit
- Treatment Area Required: 700,000 sq ft
- Must be filled 4 times per year
- Capacity: 8, 4.5 gallon jugs, or 16, 2.5 gallon jugs





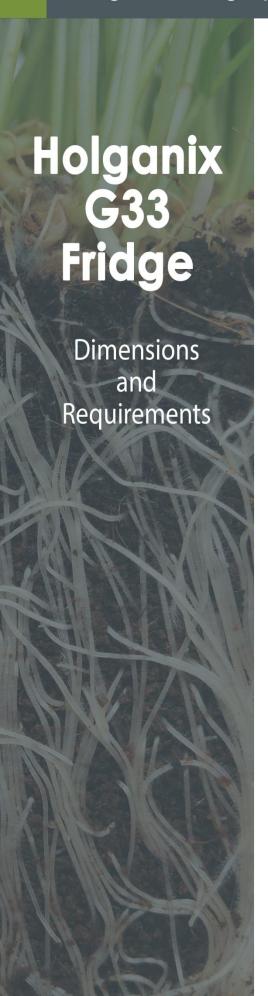


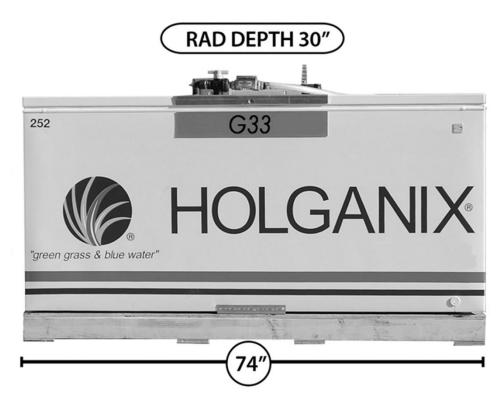


- 110 (20AMP) electrical circuits with outlets within 5ft from unit
- Treatment Area Required:2.5 Million sq ft
- · Must be filled 4 times per year
- Capacity: 30, 4.5 gallon jugs, or 60, 2.5 gallon jugs









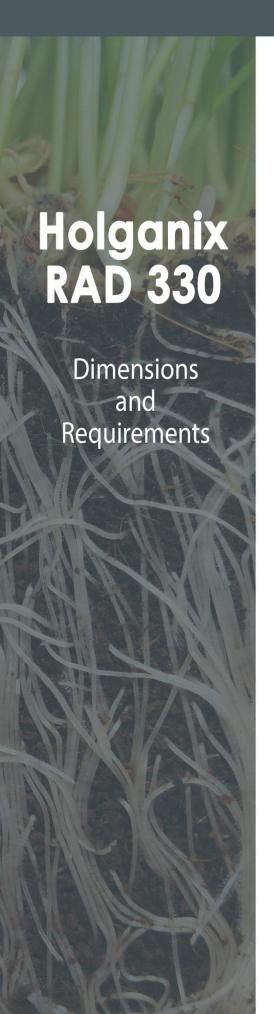
- Garden hose supply line
- 1 110 (20AMP) electrical circuits with outlets within 5ft from unit
- Totes measure 42"W X 48"H X 48"D, Extra totes can be added for more water

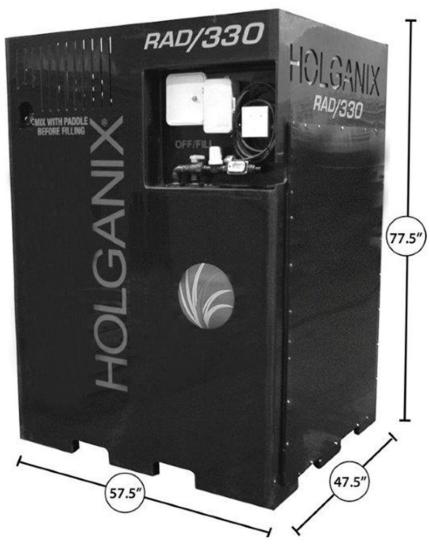
Treatment Area Required:

- 3.5 Million sq ft
- Must be filled 4 times per year
- · Capacity: 180 gallons





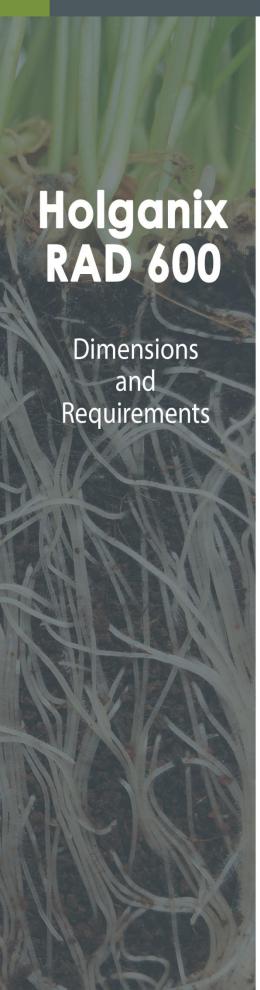


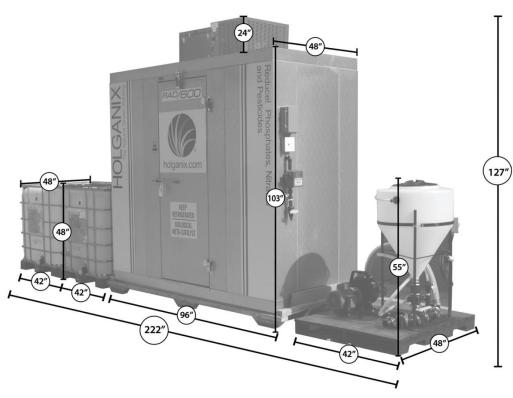


- · Garden hose supply line
- 2 110 (20AMP) electrical circuits with outlets within 5ft from unit
- Totes measure 42"W X 48"H X 48"D, Extra totes can be added for more water
- Treatment Area Required:3.5 Million sq ft
- Must be filled 4 times per year
- Capacity: 180 gallons

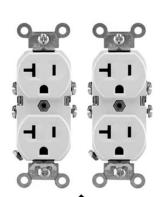








- Garden hose supply line
- 2 110 (20AMP) electrical circuits with outlets within 5ft from unit
- Treatment Area Required:
 11 Million sq ft
- Must be filled 4 times per year
- Capacity: 600 gallons





HOLGANIX

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"I won't plant anything on my property without Holganix." -Brandon Haley, Red Diamond Tea and Coffee Campus

"With Holganix, the health of my turf is REMARKABLE!"
-Dan Thomas, Ed Smith Stadium, Spring Training Facility for the
Baltimore Orioles

"Holganix's transparency and high-quality organic product made the choice a no-brainer." -Brad Spencer, Lush Organic Lawn Care

"I think one of the biggest benefits of Holganix is root depth and density." -Paul B. Latshaw, Murifield Village Golf Club

"I would absolutely recommend Holganix."
-Jake Gargasz, Crooked Stick Golf Club