

Turf & Ornamental Complete Portfolio

www.dphbio.com | 1.800.648.7626



About DPH

DPH Biologicals aims to become the industry's most trusted biologicals provider. For more than three decades, we have delivered value to the row and specialty crop, turf and ornamental markets. With unique applicability across broad soil types and conditions, our proven portfolio of

Biologicals have consistently delivered solutions that help drive efficiency, performance and, ultimately, profitability.

We are committed to building upon the DPH Biologicals heritage to help meet the needs of a growing population and address global concerns of climate change, food security and clean water. For more information, visit www.dphbio.com.



Essential Plus®

An all-in-one solution – a biostimulant, stress reducer and 100% natural soil amendment optimized for plant recovery and strength. This integrated solution contains humic acid & other components to replenish soils that have been depleted of organic matter, helps alleviate soil compaction and provides a food source for beneficial soil microorganisms.



Companion® Maxx 2-0-1

This is one of our most popular turf and ornamental products; with a unique blend of organic nitrogen, seaweed, chelated iron and *Bacillus subtilis* – a powerful microbe proven to enhance nutrient uptake. These ingredients help deliver a thicker, greener and tougher turf from the roots up. Also, excellent as well for bedding and ornamental plants.



SP-1™

The complete biofertilizer, designed to manufacture fertility in the soil. This trusted technology contains a diverse community of microbes, plant-based humus extracts and algae that work together to transform soil structure, make more nutrients available and improve water use efficiency.

Golf course superintendents and lawn care operators alike rely on SP-1 to:

- Aggregate and reinoculate soil
- Improve air and water movement
- Ultimately achieve stronger, greener turf



Residue® WS

A diverse blend of naturally occurring, nutrient cycling fungal & bacterial microorganisms that also include a food source. These organisms work together to effectively break down tough plant residue, such as thatch and black layering.

This diverse microbial solution:

- Utilizes a reserve of nutrients in thatch, converting it into usable energy.
- Increases soil nutrient availability.
- Ensures a completely nontoxic and highly soluble option that can be combined with most other fertilizers.



BioNutrients™

An easy to apply, diverse mix of five species of beneficial bacteria. This biostimulant delivers an NPK of 7-0-5, a high percentage of humic acid, kelp extract as well as a natural wetting agent. The soil conditioners improve soil structure by increasing aeration and water holding capacity while providing nutrients for the plant and a food source for microbes.

- Easy to apply, water-soluble solution containing natural rhizosphere bacteria to improve soil health.
- Combines humic acid, kelp, sugars, microbes and nitrogen to improve cation exchange and promote a healthier root system.



BioNutrients™ Total-Pak

BioNutrients™ Total-Pak contains a diverse mix of beneficial soil bacteria as well as Endo and Ecto Mycorrhizae. Additionally, BioNutrients™ 1-0-4 Total Pak contains a natural wetting agent, targeted micronutrient package, soil conditioners, and microbe food. Easy to apply on new and existing trees and landscaped areas.



MST

MST is a convenient, easy to use dry product that delivers a blend of bacteria and fungi to the emerging roots and developing rhizosphere of seeded plants. MST includes eleven different microbial species to ensure the right microbes are in the right place at the right time.

- Host beneficial micro-organisms
- Increases microbial activity, nutrient cycling/availability
- Improves water holding capacity



Companion® Biological Fungicide WP

Companion® Biological Fungicide Wettable Powder contains the active ingredient *Bacillus amyloliquefaciens* strain ENV503, a plant growth-promoting rhizobacterium that:

- Increases ability to fight diseases/stressors
- Effective against soil borne diseases



Companion® Maxx Liquid Biological Fungicide

Companion® Maxx Liquid Biological Fungicide is a broad spectrum biological fungicide for the prevention, control or suppression of many soil borne and foliar diseases. Companion Maxx Liquid Biological Fungicide contains a plant growth-promoting rhizobacterium, that quickly establishes beneficial colonies on the plant's root and leaves. It protects the roots from invading pathogens, stimulates healthier roots and improves nutrient uptake.

Biology + IBA in One Unique Formulation



NEW

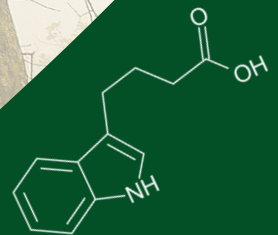
PRODUCT

Product Description

A 100% water-dispersible, broad-spectrum biostimulant. This proactive solution features IBA which works to improve root growth and nutrient absorption in turf, trees & nursery products.

Features

- Early established root vigor lead to increased nursery survival rates.
- Develops protective film around roots and cycles nutrients, enabling stronger root growth & plant development.
- Captures increased amounts of Calcium, Magnesium, Nitrogen, Phosphorus & Potassium.



Why IBA?
(Indole-3-butyric acid)

A naturally occurring auxin that:

- accelerates the rate of mitosis
- increases root development
- enhances nutrient absorption
- improves plant stress tolerance

Application Methods

Please see product label for instructions and recommendations for application methods.

Product Data

When RootXCell is applied to the soil or root structures, growers see a root mass increased by 30% - 50% in nursery products and a 60% decrease in seedling mortality rates caused by drought, transplantation, and other common stressors.

Before

After



Figure 1 –
In residential trials, we see the affects of stronger nutrient absorption through more vigorous root structures.

Control

Treated



The Breakdown

IBA

Natural auxin accelerating rate of mitosis for root development and nutrient absorption

Bacillus amyloliquefaciens

shown in multiple studies to be an aggressive colonizer in the rhizosphere

Mycorrhizae

Fungi that enhance water & nutrient uptake, more efficiently utilizing soil than roots alone

Cytokinin

Plant hormones that divide cells, to increase plant growth & budding through the roots & shoots

B-Vitamins

Vitamins used to promote root development & growth through diverse metabolic activity



**STIMULATES
ROOT
GROWTH**



**ENHANCES
NUTRIENT
UPTAKE**



**INCREASES STRESS
TOLERANCE &
SURVIVAL RATES**



**DECREASES
TRANSPLANT
SHOCK**

RootXcell is a vitamin hormone product not subject to FIFRA regulation pursuant to 40 C.F.R. § 152.6(f). Not for food use.



BioAeration™

A leading biology-based aeration solution.

DPH Biologicals™ BioAeration™ is a 4-product system designed to manage thatch, reduce layering and transform the overall soil profile.

This program replaces traditional aeration by applying nutrients and targeted biology to aggregate the soil –reducing and repurposing thatch into a soil-building, plant-available bioactive carbon as an more environmentally sustainable solution.

Unique Benefits of BioAeration™ What's in it?

- Strengthens soil structure & nutrient availability
 - Enhances root vigor & structure
 - Improves water use efficiency & drainage
 - Effective in managing thatch & black layer
 - Extends number of playable days on sports fields & golf courses
 - Eliminates mechanical aeration disruptions
 - Reduces the number of turf/lawn interventions
- **SP-1:** The complete biofertility solution that transforms soil structure, enhancing plant growth and root development.
 - **Residue WS:** Water soluble biofertilizer designed to quickly and effectively break down tough plant residues.
 - **Cal Mag Max:** Proprietary combination of water-soluble calcium and magnesium with nitrate nitrogen to promote soil aggregation and green turf through photosynthesis.
 - **Nitro 22:** Homogenous blend of ammonium sulfate and slow-release nitrogen to optimize performance in high pH and Ca soils.



Golf Courses

Basking Ridge Country Club
Basking Ridge, NJ

May 2022 → July 2022



Sports/Recreational Fields

Grand Park Sports Campus- Westfield, IN

August 2022

Core Aeration

BioAeration™



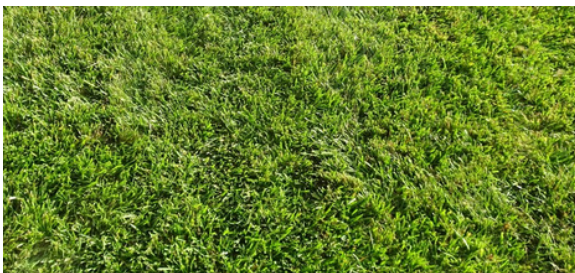
Residential Lawn

San Jose, California

April 2022

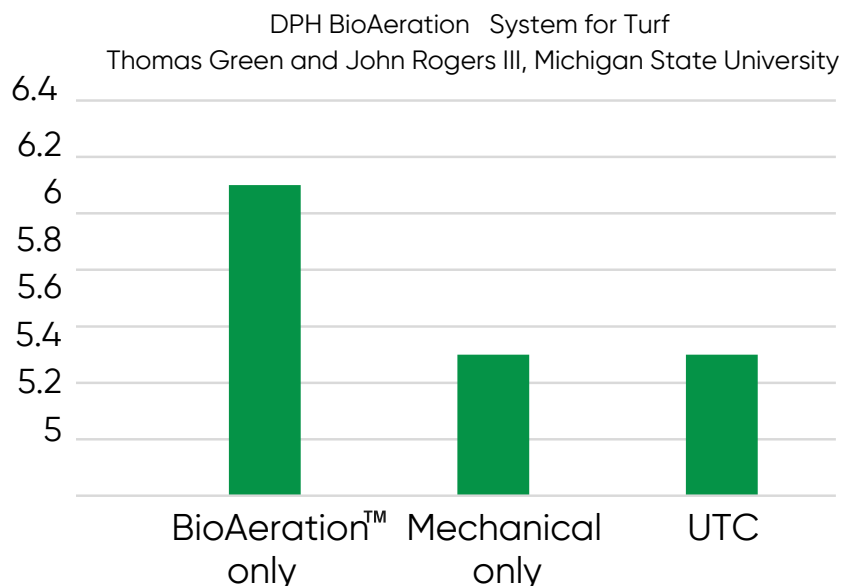


November 2022



University Research

In a trial by Michigan State University, BioAeration™ outperformed mechanical aeration as a replacement.



Turf quality based on a 1 - 9 scale
1 being poor, 6 being acceptable, & 9 being the best

Soil Conditioners

Hydro-Max

- Increases water and fertilizer penetration to soil
- Loosens compacted soils

pH Reducer

- Ideal for all types of fertigation systems
- Compatible with fungicides and insecticides

Fungicide

Ultraphte Systemic Fungicide

- Quick uptake by plant
- Pairs with other fertilizers & pesticides

MicroNutrients

Cal Mag Max 7-0-3

- Aids in greening up plants
- Adds Ca to help soil aggregation
- Increases turf standability
- Quick uptake of nitrogen

Magnesium 3%

- Quickly corrects magnesium deficiencies
- Assists chlorophyll production
- efficient in high pH soils

Manganese 5%

- Ideal for mixing pH acid sensitive products
- Foliar & root absorption
- Easily corrects deficiencies

X-Xtra Iron 6-0-0

- 100% chelated
- Fast green up, no surge growth
- Compatible with PGR's
- Corrects Iron Chlorosis overnight

Micrel Total 5-0-0

- Corrects & maintains balanced micronutrients
- Higher amounts of chelated Iron and 5 chelated micronutrients

MicroTech CT 4-0-0

- Corrects micronutrient deficiencies
- Flexible application methods
- Contains 5 chelated micronutrients

Fertilizers

Arbor Care 15-8-4

- A true solution for root injection
- Fertilization with N-P-K and micronutrients

Liquid Potassium 0-0-25

- Immediate plant uptake
- Low salt index
- Adjusts water & soil pH

Micrel K 0-0-5

- Easy to use application
- Potassium & Sulfur source

NITRO-28 SRN 28-0-0

- Economical Nitrogen
- Dual efficiency: foliar/root uptake
- Low Salt Index

NITRO-K SRN 20-0-10

- Provides most efficient & reliable Nitrogen & Potassium sources
- Multiple uses & application types

NITRO-22 + Sulfur 22-0-0

- SRN with quick release ammonium sulfate
- Great for high Calcium soils
- Economical for low volume turf sprayer

ProBalance 15-0-15

- Contains SRN & 4 chelated micronutrients: Cu, Fe, Mn, Zn
- Foliar and Root feeding
- Low Salt

Quick Response 20-3-3

- Contains SRN
- Fast green up
- Mixes with other technical materials

Starter Plus Bloomtastic 8-32-5

- Contains SRN
- Flexible applications
- Tank-mix compatible with fungicides, herbicides and insecticides

The Classic 18-0-6

- Less volatilizing & leaching
- Dual action through leaves & roots
- No harmful chlorides, hydroxides or high sulfur products