BioPlex® PATHOGEN POWER+

MULTI TURF & ORNAMENTAL PEST MANAGEMENT SOLUTIONS

Active Ingredient: 5.75% CHITOSAN (Contact & Systemic)

When Used on Turf Grasses, a NEW GENERATION Contact and Systemic Turf and Ornamental Fungicide Helps Prevent Pythium, Dollar Spot, Brown Patch, Anthracnose and More! Welcome to a New Generation of Disease Management where "Science and Technology Touches Nature".

Preventing Pythium Along with Dollar Spot, Brown Patch and Anthracnose for One Incredibly Low Cost Represents "REAL VALUE". Field Test a Case Today and "Save More In 2024".

What T/O Disease Pathogens & Pests Does it Control?

Fungi and Oomycetes: Alternaria, Anthracnose, Armillaria, Aspergillus, Botrytis, Cladosporium, Coleoptera, Colletotrichum, Curvularia, Downy Mildew, Fusarium, Macrophomina, Melanose, Monilinia, Phoma (onion pink root rot), Phomopsis, Phytophthora, Powdery Mildew, Pythium, Rhizoctonia- Brown Patch, Sclerotinia - Dollar Spot, Sclerotium, Sooty Mold, Stromatinia, Verticillium.
Bacteria: Agrobacterium, Bacterial Blast, Clavibacter, Erwinia, Pectobacterium, Pseudomonas, Xanthomonas.
Viruses: Mosaic viruses and Potato Virus X.
Nematodes: Gall nematode (Anguina spp.), Guava nematode (Meloidogyne spp.), Potato cyst nematode (Globodera spp.), Reniform nematode (Rotylenchulus spp.), Root-knot nematode (Meloidogyne spp.), Root-lesion nematode (Pratylenchus spp.), Soybean Cyst Nematode (Heterodera spp.), Stem nematode (Ditylenchus spp.), Sting nematode (Belonolaimus spp.)

Insects... Chewing, Sucking, Root Feeding Types: Aphids, Borers, Cereal Leaf Beetle, Colorado Potato Beetle, Corn Borers, Corn Earworm, Corn Root Maggots, Corn Rootworm, Crickets, Diamondback Moth, Grasshoppers, Leaf Miners, Mealy Bugs, Mites, Pea Weevils, Plant Bugs, Pine Beetles, Psyllids, Slugs, Snails, Stink Bugs, Sugarcane Aphids, Thrips, White Flies, Wireworms.

Why Should I Consider Using it?

Seeking an Inexpensive FUNGICIDE Substitute with Dependable High Functioning Results?

Bioactive natural organic products continue to win market share from synthetic chemicals as consumers and businesses are becoming more aware of their environmental impact. ***BioPlex*** **Pathogen POWER+** 5.75% chitosan solutions provides an exciting opportunity for your golf course turf grass manager to find dependable high functioning disease control substitutes, without sacrificing performance results, expectations or the bottom line. ***BioPlex*** **Pathogen POWER+** is "first and formost" a broad spectrum EPA designated turf and ornamental FUNGICIDE. It is Safe (Natural Organic) - Tank-Mix Compatible - No Resistance - Effective and Inexpensive. So, if the dependable control of Anthracnose, Dollar Spot, Brown Patch, Fusarium and Pythium are primary objectives of your FUNGICIDE ROTATION, you can purchase ***BioPlex*** **Pathogen POWER+** with confidence and have "nothing to lose" with our introductory "Test Buy", ***100% Performance Satisfaction Guarantee!***

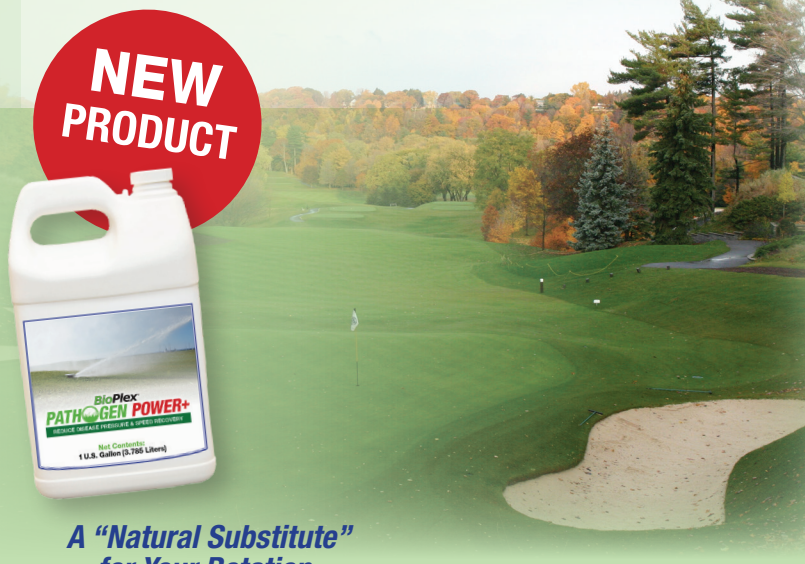
Facts!

Chitosan is a VERY SAFE, Broad Spectrum Fungicide.

BioPlex **Pathogen POWER+** 5.75% Chitosan is 100% bio-compatible, biodegradable, and hypoallergenic. Chitosan's safety has been extensively studied by researchers, independent scientific review committees at the EPA, by the FDA, and more. It has been found to be safe for humans and the environment.

5.75% Chitosan is NEW 2023 Proprietary Technology.

If asked, ***BioPlex*** **Pathogen POWER+** 5.75% chitosan active ingredient product technology is quite new. After 5 years of research and development plus a 3 year EPA application process, it was recently granted the EPA 25b exemption in January of 2023. Note, the final approval public notice has not yet been posted to EPA website. EPA 25b exemption verification is available upon request.



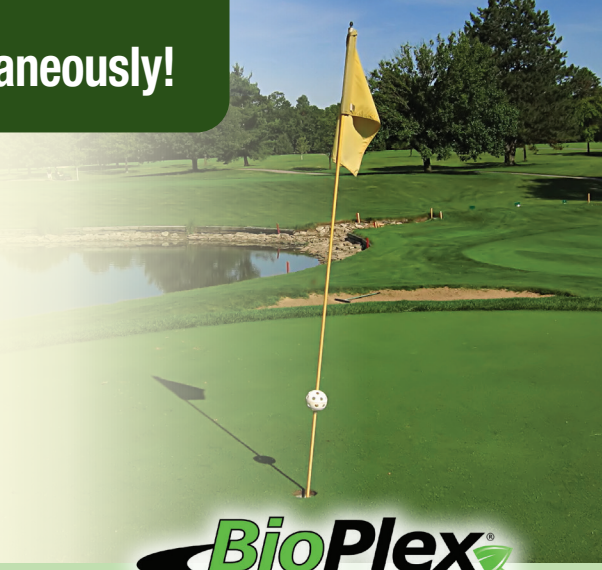
A "Natural Substitute" for Your Rotation.

BioPlex **Pathogen POWER+** Chitosan is a natural bioactive molecule that when incorporated into a pesticide rotation will help improve turf grass health, playing conditions and potentially help reduce the need for chemical pesticide applications.

BioPlex® ORGANICS

BioPlex Organics..."Where NATURE Meets SCIENCE"...TOLL FREE 800-441-3573 | TEXT @ 717-917-5126 | bioplex@earthlink.net | Bio-Plex.com

MOA'S and How it Controls Disease & Pests Simultaneously!



To Better Understand HOW "Pathogen Power" Works, Let's First Define the Terms Chitin, Chitosan and Chitinases.

Chitin (Raw Ingredient) is present in the extra cellular skeletons of a variety of invertebrates including crustaceans, insects, sponges, molluscs, nematodes, arthropods and fungi. Chitosan (Processed Raw Ingredient)) is a natural biodegradable and biocompatible polysaccharide derived by deacetylation of chitin. Upon contact, chitosan is Fungicidal, Bactericidal and controls chewing and sucking insects and root feeding nematodes. Chitinases (End Result of a Chitosan Application) are enzyme metabolites that degrade chitin. Chitinases also contribute to the generation of carbon and nitrogen in the ecosystem. Chitin and chitinolytic enzymes are gaining importance for their biotechnological applications to control pests and pathogens affecting turf grass and ornamental plants.

How Does Chitosan - Chitinase Control Disease and Pests?

The 5.75% Chitosan used in ***BioPlex*** **Pathogen POWER+** is "uniquely different" than most Chitosan products. Through bio-engineering it gains the increased ability to effortlessly bind with a wider array of plant cell CERT-1 receptor sites. The receptor sites are what triggers the plants Induced Systemic Response (ISR). This systemic response results in the release of (1) Chitinases (2) Pheramones and (3) Hormones. Chitinases are the enzymes that degrade chitin and represent a primary Mode of Action (MOA) leading to the control of disease pathogens, chewing and sucking insects and root feeding nematodes. It's important to remember, disease pathogens, insects, nematodes all contain "Chitin". Chitinase destroys chitin whereby directly killing or controlling the disease pathogens, insects and nematodes it comes in contact with. For example: The "stylet" or the mouth part of the root feeding nematode is the main organ of a nematode which helps in making a perforation on the host tissue/cell, injecting saliva (enzymes) and ingesting the food. The "stylet" is made of Chitin and dissolves in the presence of Chitinase in the root hairs and subsequently starves to death resulting in the elimination of the root feeding pest. So, primary Fungicide applications may also result in secondary pest control results.

Chitosan CONTROLS Disease Pathogens and Plant Pests by Both FOLIAR and ROOT DRENCH MOA'S.

BioPlex **Pathogen POWER+** 5.75% Chitosan has great potential as a CONTACT antifungal agent to treat a diverse variety of disease pathogens affecting turf grass and ornamental plants. Target sensitive disease pathogens are eliminated or controlled thru plasma membrane permeabilisation by chitosan. Effective CONTACT control of disease pathogen and pests can also be achieved thru a SOIL DRENCH application.

Secondary CONTROLS thru SYSTEMIC BIOACTIVE Plant Defence (ISR) SIGNALING.

BioPlex **Pathogen POWER+** 5.75% Chitosan binds to a specific plant cell wall receptor (CERK-1), triggering an induced systemic plant response (ISR) that yields a host of benefits. Turf grasses and ornamental plants can benefit immensely from the strategic use of chitosan in targeted turf grass maintenance programs. The ISR response results in the release or synthesis of (1) pheromones, (2) hormones and (3) chitonase enzymes. The NET APPLICATION RESULT is (a) leaf and soil disease pathogens, (b) chewing and sucking insects and (c) root feeding nematodes are all effectively killed, controlled or temporarily repelled.

Secondary Plant Health Benefits?

Chitosan ISR SIGNALING also Increases Plant Hydration and Stress Tolerance.

BioPlex **Pathogen POWER+** 5.75% Chitosan binds to a specific plant cell wall receptor (CERK-1), triggering an induced systemic plant response (ISR) that yields secondary and tertiary plant benefits. The second SYSTEMIC plant response, (scientifically, it is not clearly understood yet) increases turf grass osmotic pressure - elevating both nutrient mobility and cellular hydration capacities. This results in greater stress resistance and elevated turf grass health and nutrition.

BioPlex PATHOGEN POWER+

MULTI TURF & ORNAMENTAL PEST MANAGEMENT SOLUTIONS

NEW PRODUCT

Package:
Gallon, 4x1 Gallon/ CS

What Are the Costs of Application?

(1) Applied as a Soil Drench-Systemic "Preventative" every 14-28 days or as required, (16 fl oz/ acre). *$49.88 acre/ application.

(2) Applied as a Foliar Contact-Systemic "Preventative" Application every 14 days (8-16 fl oz/ acre), *$24.93- $49.88/ acre/ application.

(3) Applied as a Foliar Contact-Systemic "Curative" Application every 14 days (22 fl oz/ acre). Also applied (22 fl oz/ acre) as a Foliar Contact or Soil Drench "Preventative or Curative" for Application for Pythium, *$68.57/ acre/ application.

(4) Ornamental Use Cost: 32 fl oz per 150-200 gallons tank-mix, *$99.75 per 150-200 gallon tank-mix. Apply as a Foliar-Contact, Systemic Application.

* MSRP Price

ACTIVE INGREDIENT(S):

Poly-D-Glucosamine - Chitosan:..... 5.75%

Total Other Ingredients:

Vinegar, Water 94.25%

Derived From:
Processed Insect and Arthropod Exoskeletons, Crustaceans, Shellfish and Fungi