

introducing  
**Colonize**

**A proven VA Mycorrhizae  
Stimulant for Turfgrass**

Developed with researchers at Michigan State University, Colonize™ contains a unique patented isoflavone isolated from the roots of clover plants which were stressed by nutrient deficiency. Colonize increases fungal hyphal growth and the rate of root colonization by endomycorrhizal fungal species. This is especially important for golf course soils where VAM populations are typically low due to high levels of pesticides and fertilizer, and other practices that can reduce natural populations of VAM.

The following chart describes application rates and programs for golf course and athletic turf using PHC biological products.

**TURF MAINTENANCE**

PURPOSE	PRODUCTS	RATE	TECHNIQUE	FREQUENCY
Improve Turf Color, Vigor, and Health	<b>Flexx™ Turf Premix</b>	Initial: 14 Lb./Acre Maintenance: 7 Lb./Acre	Mix with water and apply as spray. Follow with an irrigation to water-in the product	Every 2 weeks during the growing season
To Increase VAM Development	<b>Colonize™ T&amp;O VAM Stimulant</b>	Initial: 2.5 Lb./Acre Maintenance: 1/2 Lb./Acre	Mix with water and spray over turf	Every 2 weeks
Reduction of Fungicide Dependency	<b>PHC™ Compete™ Rhizosphere Inoculant</b>	Initial: 4 Lb./Acre Maintenance: 2 Lb./Acre	Mix with water and apply as spray. Follow with an irrigation to water-in the product	Every 2-4 weeks as needed. May be mixed together with Flexx™ and/or Yuccah
Treatment and Prevention of Dry Spots on Greens	<b>Yuccah™ Natural Wetting Agent</b>	6-oz./1000 ft²	Mix with water and apply as spray	Every 2-3 weeks as needed.
Dew Control	<b>Yuccah™ Natural Wetting Agent</b>	1oz./1000 ft²	Mix with water and spray over turf	Every 3-5 days as needed
Root growth Stimulation/ Bionutrition	<b>PHC™ BioPak™ Biostimulant</b>	1 Lb./Acre	Mix with water and apply as spray. Follow with an irrigation to water-in the product	Every 2 weeks as a substitute for Flexx™ when chelated Iron is not desired
For Control of Armyworms and Sod Webworms	<b>Lepinox™ WDG Bioinsecticide</b>	1-2 Lb./Acre when early instar larvae appear	Mix with water and apply as spray	Repeat as needed to maintain pest control
Thatch Reduction	<b>Dethatch™</b>	2 Lb./Acre	Mix with water and apply with Yuccah™ as a spray	Every 2-4 weeks as needed to control thatch. Results are not usually apparent until after third application
Improve Fertilizer Uptake	<b>PHC™ Humex™ WS</b>	1 Lb./Acre	Mix with water and apply as spray	Monthly
Stress Reduction	<b>Yuccah-Seakelp™</b>	2 Lb./Acre	Mix with water and apply as spray	Monthly. May be substituted for alternate treatments of Humex WS

Note: All of the above water-soluble products are compatible for simultaneous application.

# Below-Ground Turf ecology

## A NATURAL SYSTEMS APPROACH

The PHC approach to turfgrass management is to create soil conditions that best allow the natural growth processes of turfgrass to perform as desired. While natural soil ecosystems contain plentiful beneficial bacteria and mycorrhizal fungi that ensure healthy, sustainable growth, intensively managed turf typically lacks microbial diversity. As a result, disease, nematodes and nutrient stress on tees and greens is commonplace.

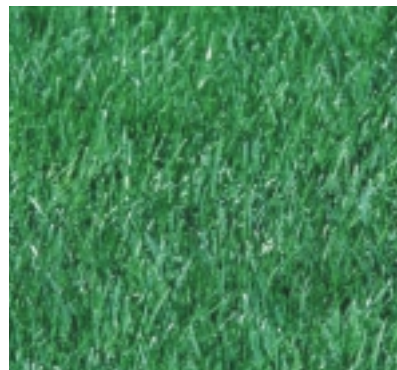
## WHERE SCIENCE AND NATURE CONVERGE

PHC Turf Products are designed to restore a functional biological ecosystem to distressed and depleted turf soils. Our "Natural Systems Approach" emphasizes prevention over cure, and cooperation with natural growth processes over chemical treatment. The result is a more sustainable, environmentally compatible turf management program.



Available from Plant Health Care, Inc.  
and select PHC Distributors

**1-800-421-9051**  
[www.planthealthcare.com](http://www.planthealthcare.com)



The following chart describes application rates for turfgrass seeding, hydroseeding and sod installation using PHC biological products.

## TURF INSTALLATION

PURPOSE	PRODUCTS	RATE	TECHNIQUE	FREQUENCY
VA Mycorrhizal Fungi Inoculation at Seeding	<b>Mycor™ Turf Saver™ with Colonize™</b>	20 Lb./1000 ft² Dry	Apply uniformly and rake into the upper 2" of soil prior to seeding	Before seeding
VA Mycorrhizal Fungi Inoculation at Sod Installation	<b>Mycor Turf Saver™ with Colonize™</b>	20 Lb./1000 ft² Dry	Apply uniformly and lay sod overtop without raking	Before sod installation
Organic Fertilizer for Seed/Sod Installation	<b>Healthy Start™ 3-4-3 biofertilizer</b>	10 Lb./1000 ft² Dry	Apply uniformly and rake into the upper 2" of soil prior to seeding, or apply uniformly and lay sod overtop without raking	Before sod installation or seeding as soil prep
To promote fast root growth	<b>PHC™ Biopak™</b>	1/4 Lb./5000 ft²	Mix with water and spray over turf followed by irrigation	After sod installation or seed germination
To stimulate VA Mycorrhizal Fungi	<b>Colonize™ T&amp;O</b>	1.5 Lb./8000 ft²	Mix with water and spray over turf followed by irrigation	After sod installation or seed germination
To increase water holding capacity of soil	<b>Terra-Sorb™ Medium</b>	3 Lb./1000 ft² Dry	Till product into the top 2" prior to seeding or sodding	Before sod installation or seeding
To improve seed germination	<b>Terra-Sorb™ Seedcoat Gel</b>	1 Lb. per 100 Lb. Dry Seed	Mix dry product with dry seed prior to seeding	At seeding

## HYDROSEEDING PRODUCTS

To increase seed germination and growth in a hydroseeding mix	<b>BioPam™ Tackifier/Stimulant</b>	5 Lb./Acre at suggested dilution of 5 Lb./6000 Gallons water	Add last to hydroseeding mix	At hydroseeding installation
To bind components of hydroseeding mix and improve water penetration and retention	<b>TerraPam™ Tackifier</b>	3 Lb./Acre at suggested dilution of 5 Lb./6000 Gallons water	Add last to hydroseeding mix	At hydroseeding installation

Mycor™, Turf Saver™, Colonize™, Healthy Start™, Terra-Sorb™, BioPak™, BioPam™, Terra-Pam™, PHC™, Flexx™, Dethatch™, Yuccah™, Humex™, and Yuccah-Seakelp™ are trademarks of PHC Royalty Corp. Lepinox™ is a trademark of Ecogen Inc. © 2000 PHC Royalty Corp.