SEGWAY®
FUNGICIDE SC
Technical Bulletin

February 2018

Introduction

Segway® Fungicide SC is proven to offer consistent and rapid control of Pythium root dysfunction, Pythium blight, Pythium root rot, and Pythium damping-off. The active ingredient in Segway, cyazofamid, stops spores from germinating, inhibiting all stages of Pythium fungal development.

University and real-world trials show Segway is highly effective in protecting professionally managed turf areas against Pythium diseases over a period of 7 to 28 days, depending on the level of disease pressure. And Segway has no known cross-resistance with existing fungicides, making it the ideal foundation of a disease management rotation program.

Turf Use Rates

Turf disease	Fluid ounces per 1,000 ft²	Fluid ounces per acre	Application interval (Days)	Remarks
Pythium blight Pythium damping-off	0.45 - 0.9	19.6 - 39.2	14 to 21	Refer to the label for specific use directions
Pythium root dysfunction	0.9	39.2	14 to 28	Refer to the label for specific use directions
Pythium root rot	0.9	39.2	21	Refer to the label for specific use directions

General Information

Segway is classified as a non-volatile compound as the active ingredient has a low vapor pressure (<1.33X10-5 pascals @ 25° C).

FORMULATION

Flowable suspension concentrate (SC) with 3.33 lb./gal. or 34.5% wt./wt. of the active ingredient cyazofamid

LABELED DISEASES

Segway is proven to protect against:

- Pythium blight
- Pythium root rot
- Pythium damping-off
- Pythium root dysfunction

USE SITES

Segway can be used on professionally managed turf areas including golf courses (tees, fairways and greens), sod farms, seed farms, college and professional sports fields, residential and commercial lawns. Segway can be applied to newly seeded areas immediately after seeding.

REI

Segway has no restricted entry interval for golf course and landscape turf applications, and treated areas may be entered as soon as sprays have dried.

MODE OF ACTION AND ROTATION

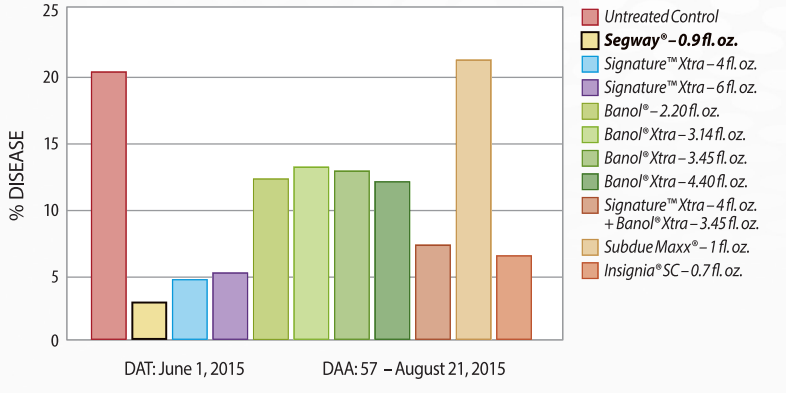
The Segway active ingredient cyazofamid features a novel mode of action that puts it in Fungicide Resistance Action Committee (FRAC) Group 21, and makes it ideal for resistance management programs. For optimum performance, start with Segway early and rotate with fungicides that use a different mode of action. Two consecutive applications of Segway may be made per year, and Segway can be applied up to three times per year at the high rate of 0.9 fl. oz. per 1000 sq. ft.

Number of applications in your rotation	Segway Rotational Program For Pythium Control				
	Application 1	Application 2	Application 3	Application 4	Application 5
1	Segway				
2	Segway	Alternate fungicide			
3	Segway	Alternate fungicide	Segway		
4	Segway	Alternate fungicide	Segway	Alternate fungicide	
5	Segway	Alternate fungicide	Segway	Alternate fungicide	Segway

Performance Data

University field trials comparing Segway with other registered fungicides show that Segway delivers exceptional control of Pythium in turf across varying environments and disease pressures.

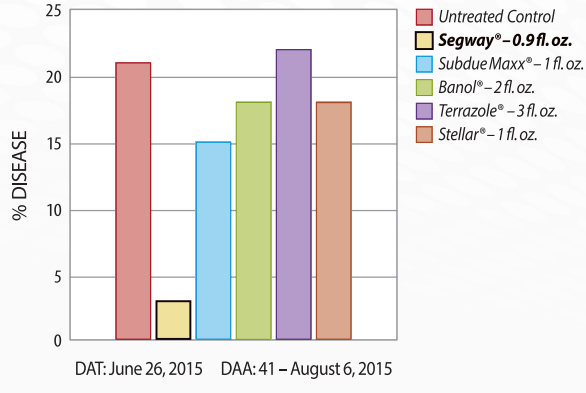
Pythium Root Rot Control
Creeping Bentgrass Putting Green
University of Maryland, 2016



DAT: Day of Application Treatment
DAA: Days After Application

14 Day Application Intervals

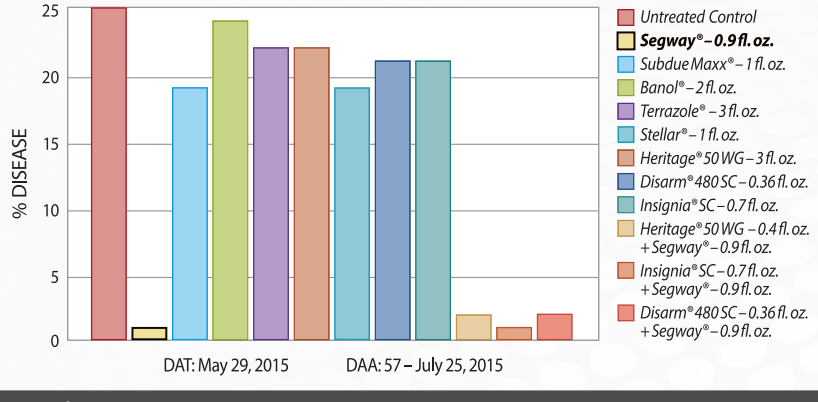
Pythium Root Rot Control
Creeping Bentgrass Putting Green
North Carolina State University, 2015



DAT: Day of Application Treatment
DAA: Days After Application

Single Application

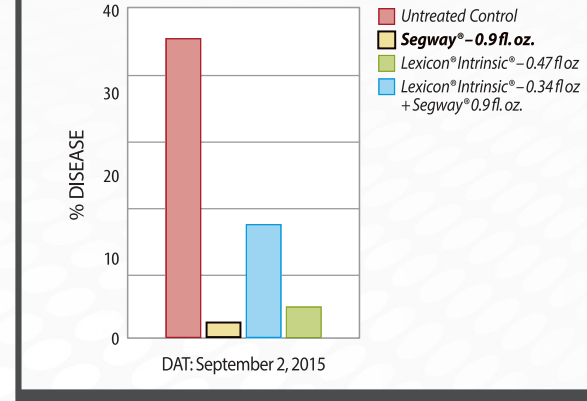
Pythium Root Rot Control
Creeping Bentgrass Putting Green
North Carolina State University, 2015



DAT: Days After Treatment
DAA: Days After Application

14 Day Application Intervals

Pythium Blight Control
Creeping Bentgrass Putting Green
University of Tennessee, 2015



DAT: Day of Application Treatment

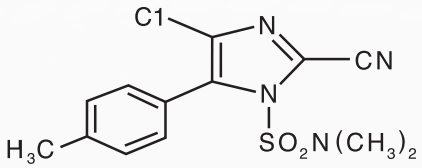
14 Day Application Intervals

Cyazofamid

ENVIRONMENTAL FATE/EFFECTS

Segway® Fungicide SC has a low water solubility (0.1 ppm), and good spreading properties on the plant surface. Rainfast soon after application, Segway clings to waxy leaf surfaces for excellent coverage and a residual foliar activity of 14 to 28 days depending on disease pressure.

PHYSICAL AND CHEMICAL PROPERTIES

Common name:	Cyazofamid
Chemical name:	4-chloro-2-cyano-N, N-dimethyl-5-(4-methylphenyl) -1H-imidazole-1-sulfonamide
Chemical formula:	
CAS number:	120116-88-3
Molecular weight:	324.9
Melting point/range:	152.7°C
pH:	4.9 at 25°C
Density:	1.446 (D_4^{20})
Water solubility (20°C):	(20° C +/- 1° C): 0.107 mg/L at pH 7
pK_a at 20°C:	No pK_a evident in pH range 2-12
Vapor pressure (25°C):	<1.33 x 10-5 Pa (@ 25, 30, 35° C)
Half-lives:	Aerobic soil: 5.5 days; Aerobic aquatic: 16.4 days; Aquatic photolysis: 0.02 days
KOC – organic-carbon sorption constant (ml g^{-1}):	from 815/657 to 1524/1062 depending on soil type

MAMMALIAN TOXICITY

Hazard Indicator	Technical
Acute oral LD^{50}	>5000 mg/kg
Acute dermal LD^{50}	>2000 mg/kg
Acute inhalation LC^{30}	>5.5 mg/L
Eye irritation	N/A
Skin irritation	N/A
Skin sensitization	N/A

ENVIRONMENTAL SAFETY

Hazard Indicator	Acute Toxicity Values
Freshwater fish	Acute LC_{50} = 0.10 ppm Chronic 33-day NOEC = 0.0901 ppm
Freshwater invertebrate	Acute 48 hour LC_{50} = >1.3 ppm Chronic 21 day NOAEC = 0.11 ppm
Estuarine Fish	Acute 96 hr. LC_{50} = >0.167 ppm
Estuarine Invertebrate	– 96 hr. LC_{50}/EC_{50} = 89 ppb mysid; 14.7 ppb mollusk

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