

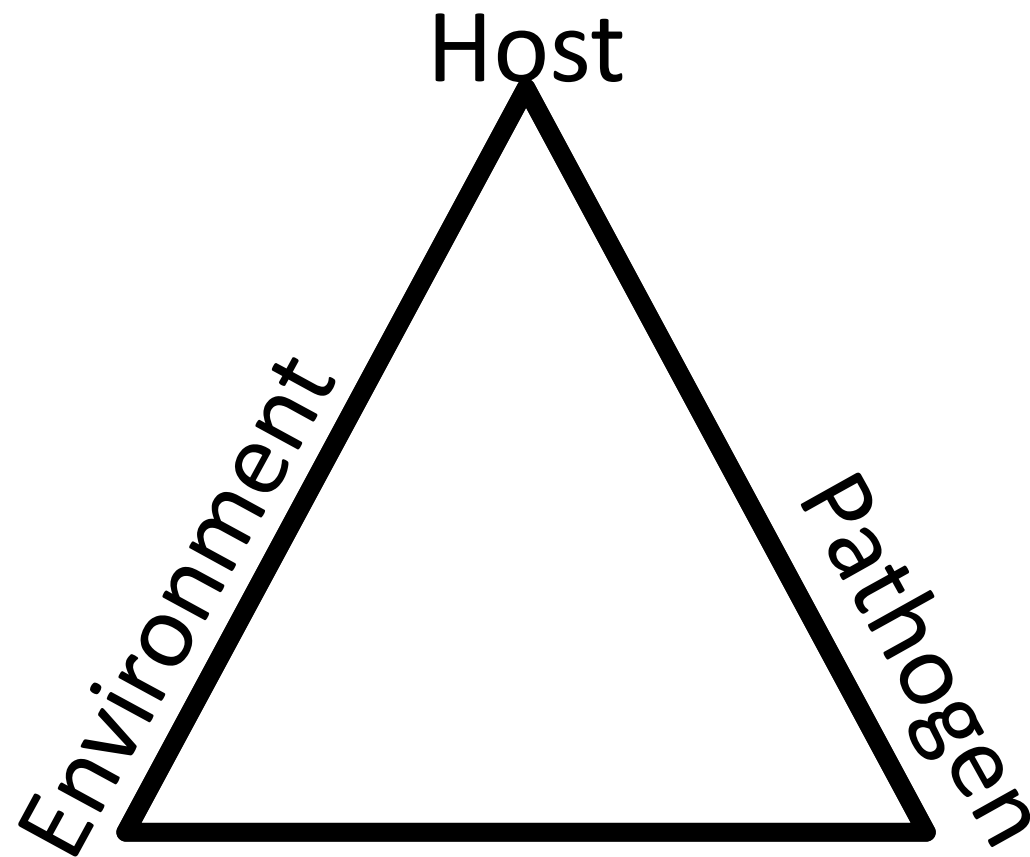


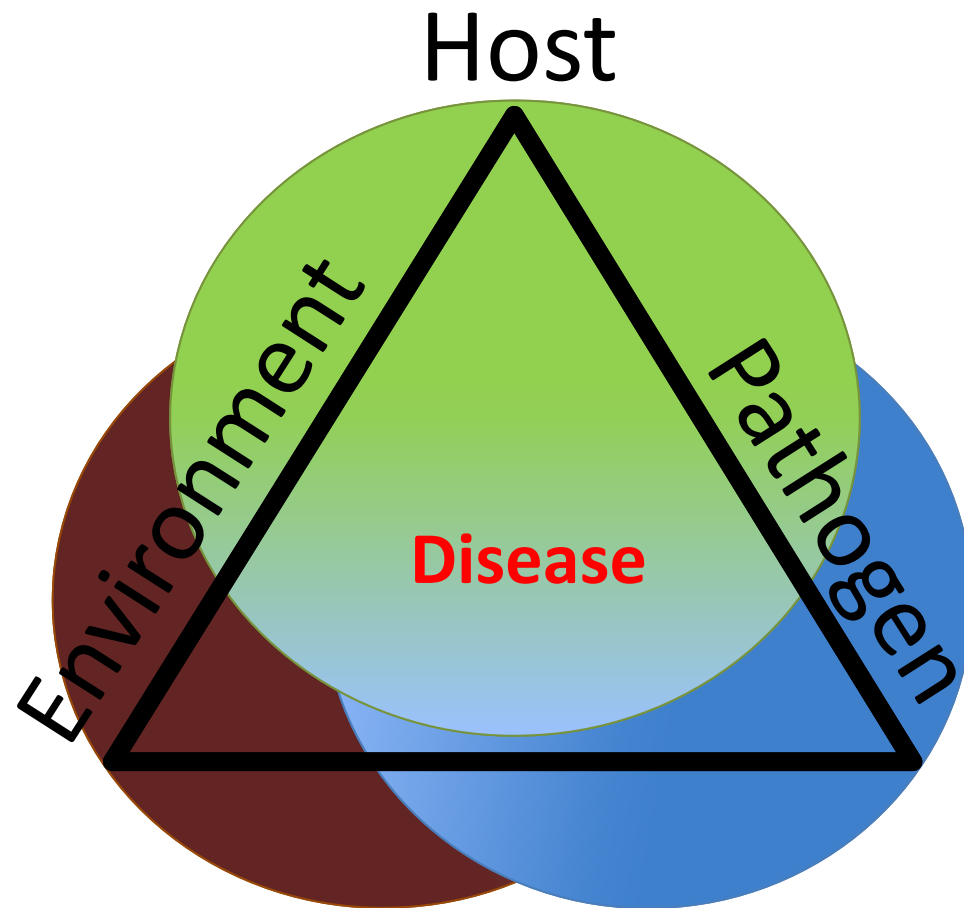
# Revolutionary Approach to the Plant Disease Triangle

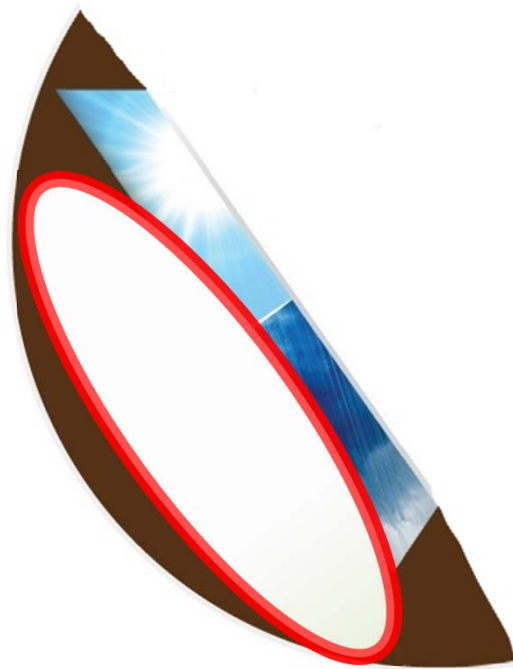
Matthew Weaver, CGCS, CPAg

---

intelligro<sup>TM</sup>



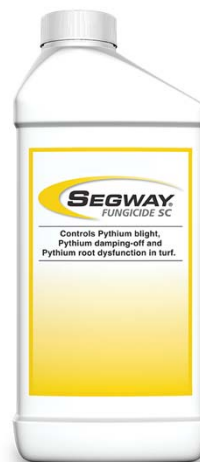




[https://www.treedoorservice.com/wp-content/uploads/2016/03/emerald\\_lake\\_tree\\_removal.jpg](https://www.treedoorservice.com/wp-content/uploads/2016/03/emerald_lake_tree_removal.jpg)









# Antimicrobial Activity – Traditional Fungicide



(*R. solani*)

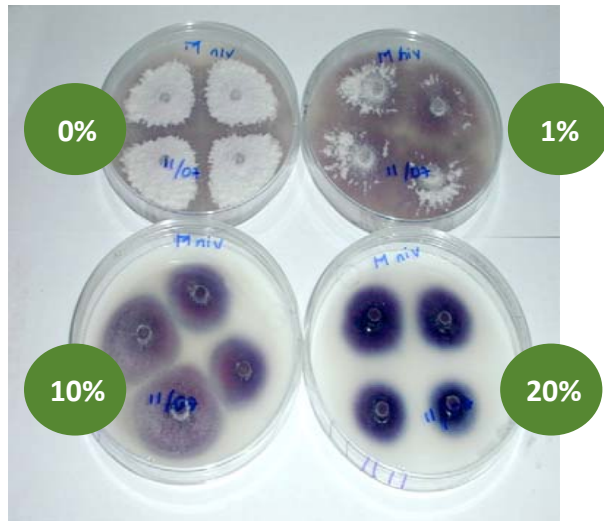
Control



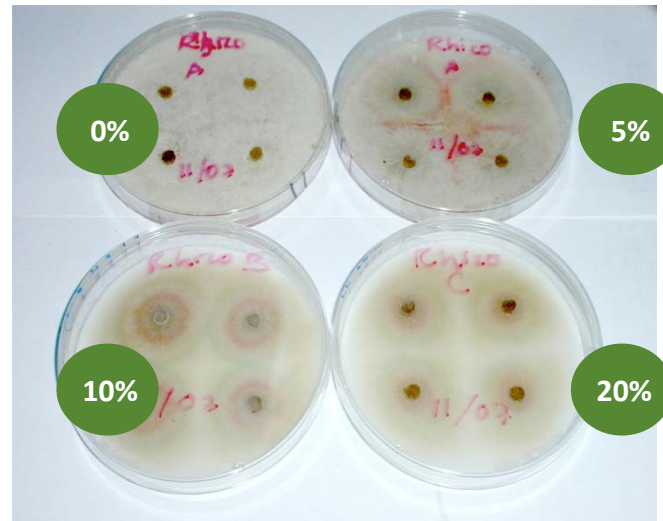
Amended



# Antimicrobial Activity – Plant Activator



*Microdochium nivale*



*Rhizoctonia solani*

# Plant Activator in the Field







# Select Appropriate Turfgrass Species



Harmon, P. F., and Latin, R. 2003. Gray leaf spot of perennial ryegrass. Online. Plant Health Progress doi:10.1094/PHP-2003-1223-01-DG.

# Select Improved Turfgrass Varieties

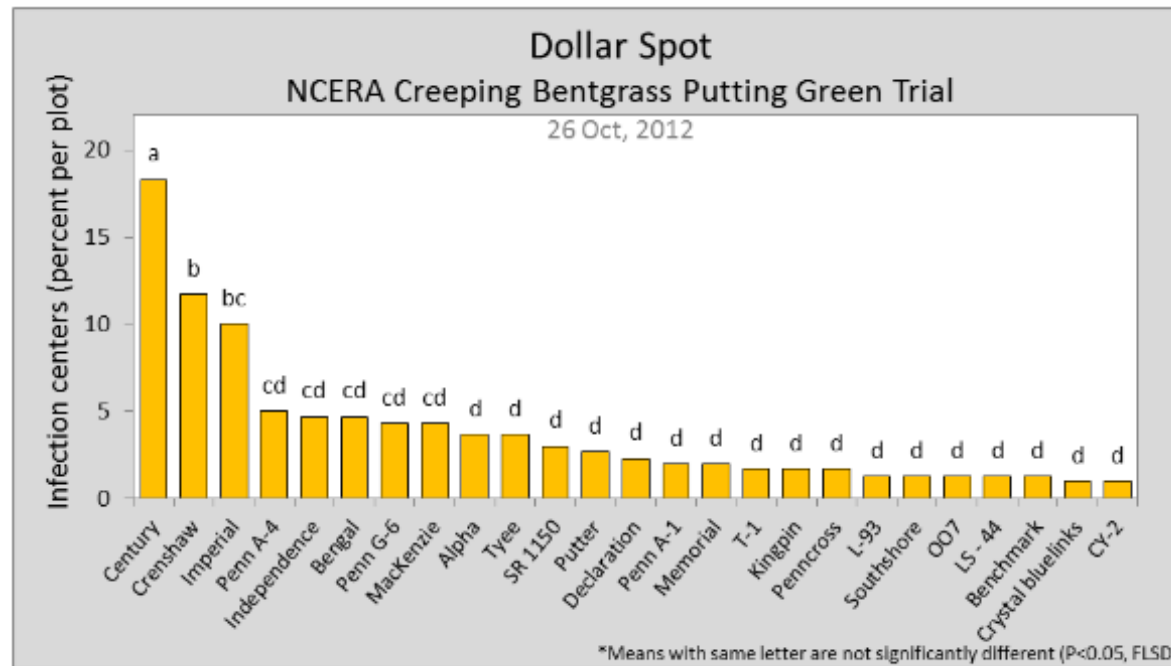
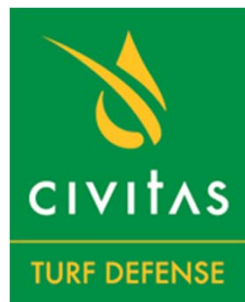


Figure 1. Dollar spot susceptibility across 25 creeping bentgrass varieties, Sunshine Course, Lemont, Illinois.

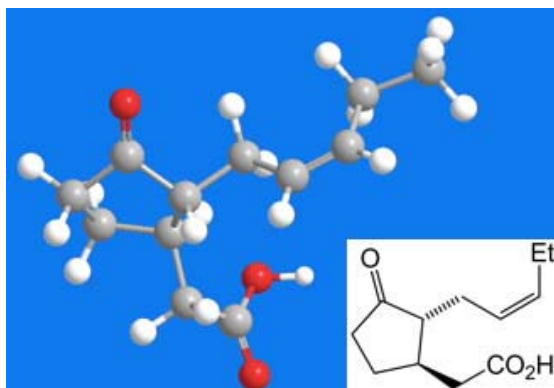
Tim Sibicky, Research from October 26, 2012 Scouting Report: Turfgrass Research - Creeping Bentgrass Cultivar Selection – Putting Greens

# Plant Defense Activators

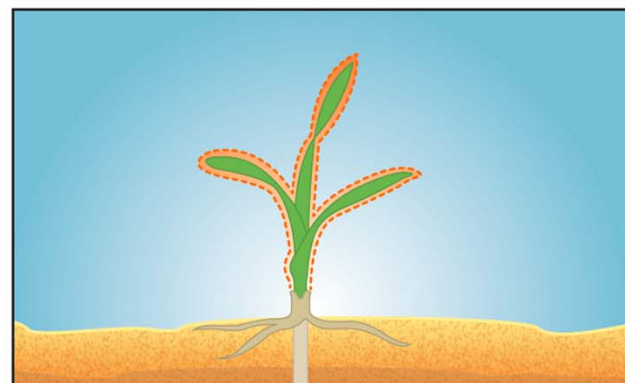
**Alude™**



intelligro



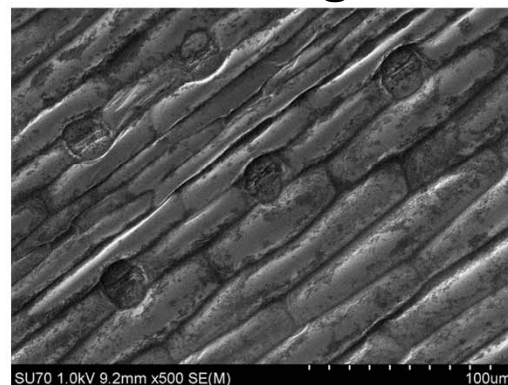
## Plant Defense Activator



## Sacrificial Cell Death



## Cell Wall Strengthened





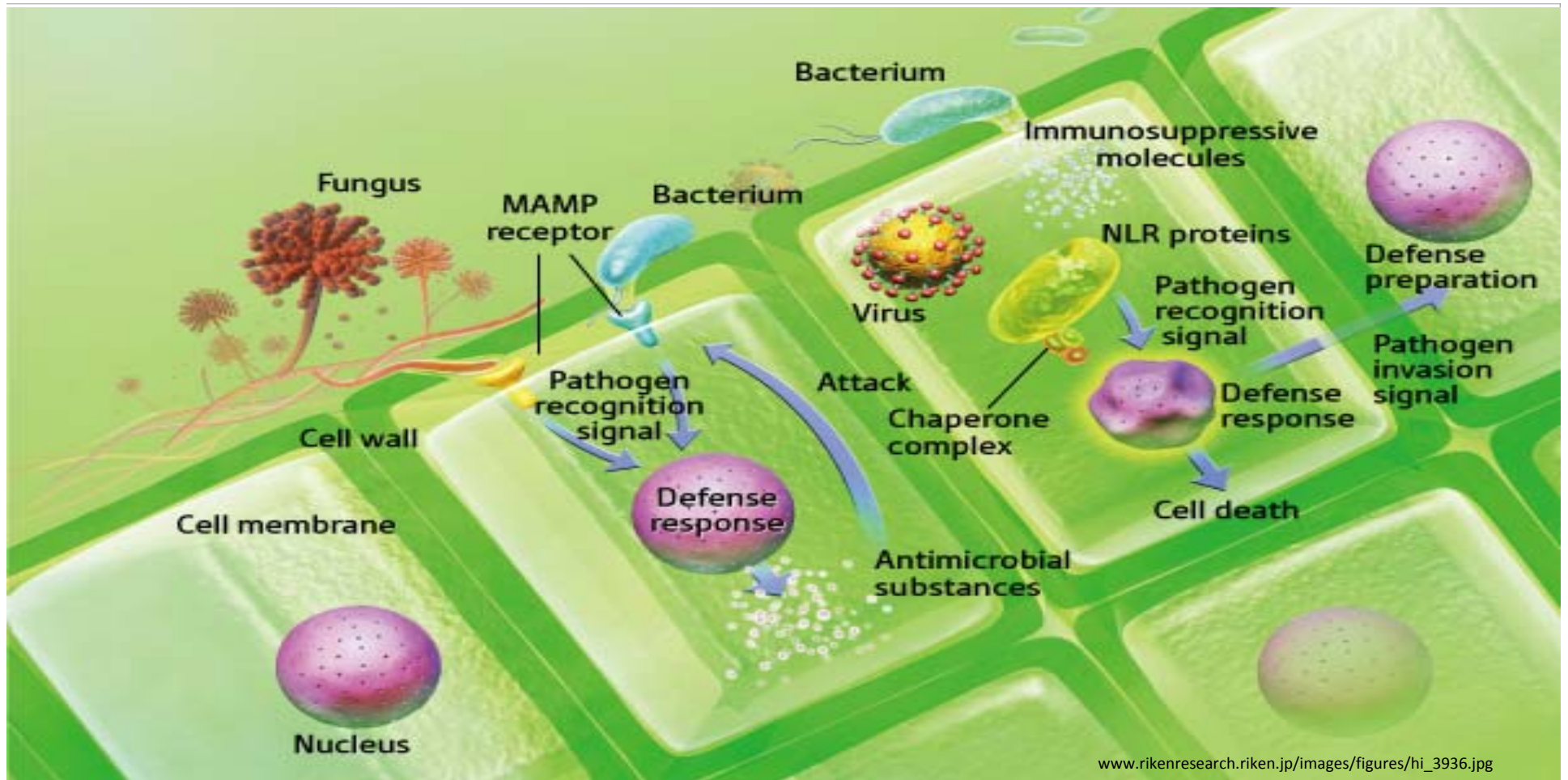




Photo Weaver



# University of Massachusetts - Dr. Michelle DaCosta - Creeping Bentgrass Trial

High Rate

Low Rate

Untreated



- 2 applications prior to drought stress
- Drought initiated 7 days after 2<sup>nd</sup> application
- 3<sup>rd</sup> application- 7 days after drought initiated
- Photos- 12 days no water

Received: 13 December 2017 | Revised: 24 September 2018 | Accepted: 27 September 2018

DOI: 10.1111/jac.12309

## CHILLING/FREEZING STRESS

WILEY

Journal of Agronomy and Crop Science

# Chemical plant protectants and plant growth regulator effects on annual bluegrass survival of ice cover

Kevin Laskowski | Kevin Frank | Emily Merewitz 

Plant Soil and Microbial Sciences, Michigan State University, East Lansing, Michigan

### Correspondence

Emily Merewitz, Plant Soil and Microbial Sciences, Michigan State University, East Lansing, MI.

Email: merewitz@msu.edu

### Funding information

United States Golf Association; Project GREEN and AgBioResearch of Michigan State University; Michigan Turfgrass Foundation

## Abstract

Annual bluegrass (*Poa annua* L; ABG) is susceptible to damage from ice cover. Effects of chemical treatments on ice survival under low temperature growth chamber conditions were studied. Field putting green plots of ABG were treated in the fall of 2014

