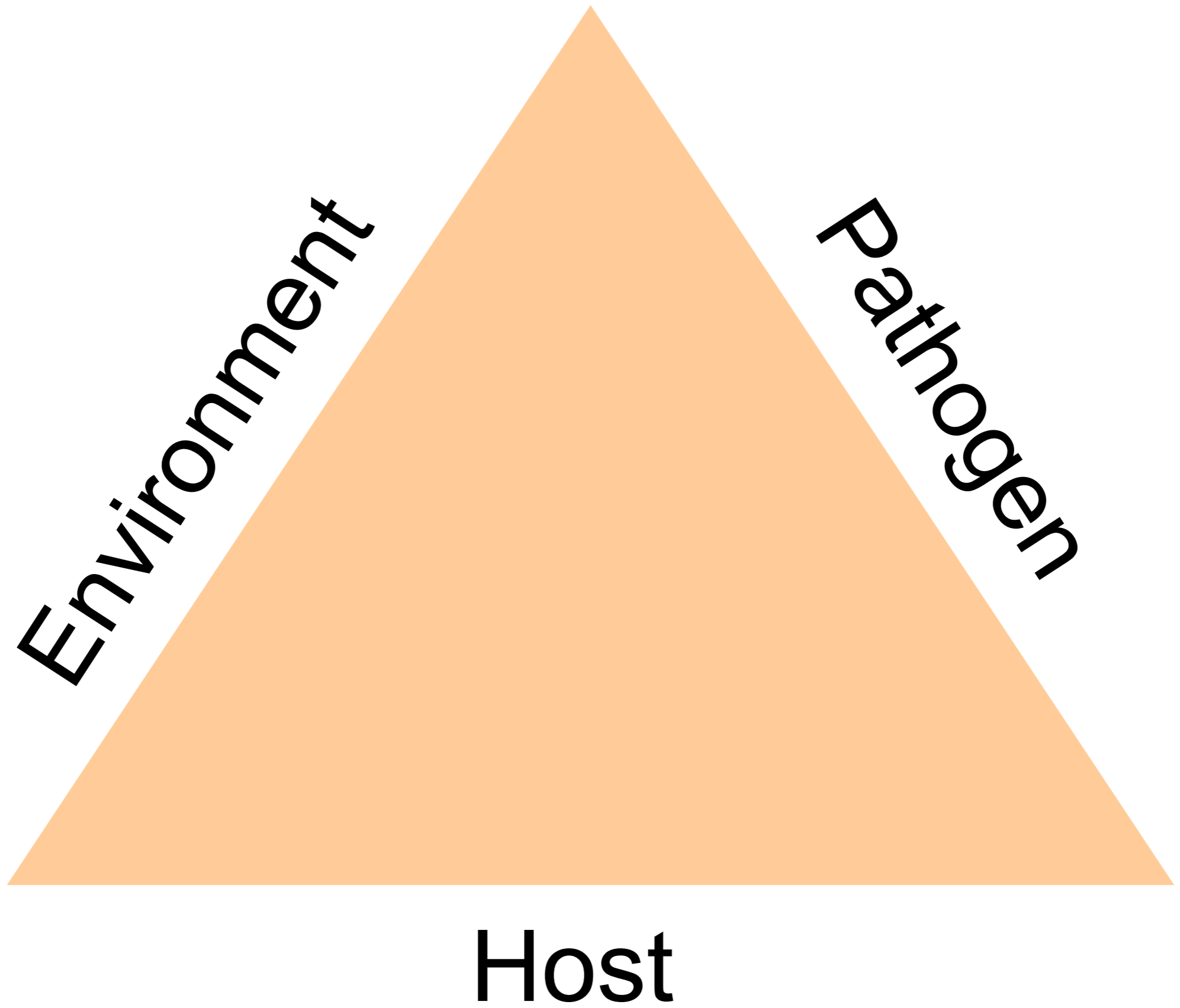


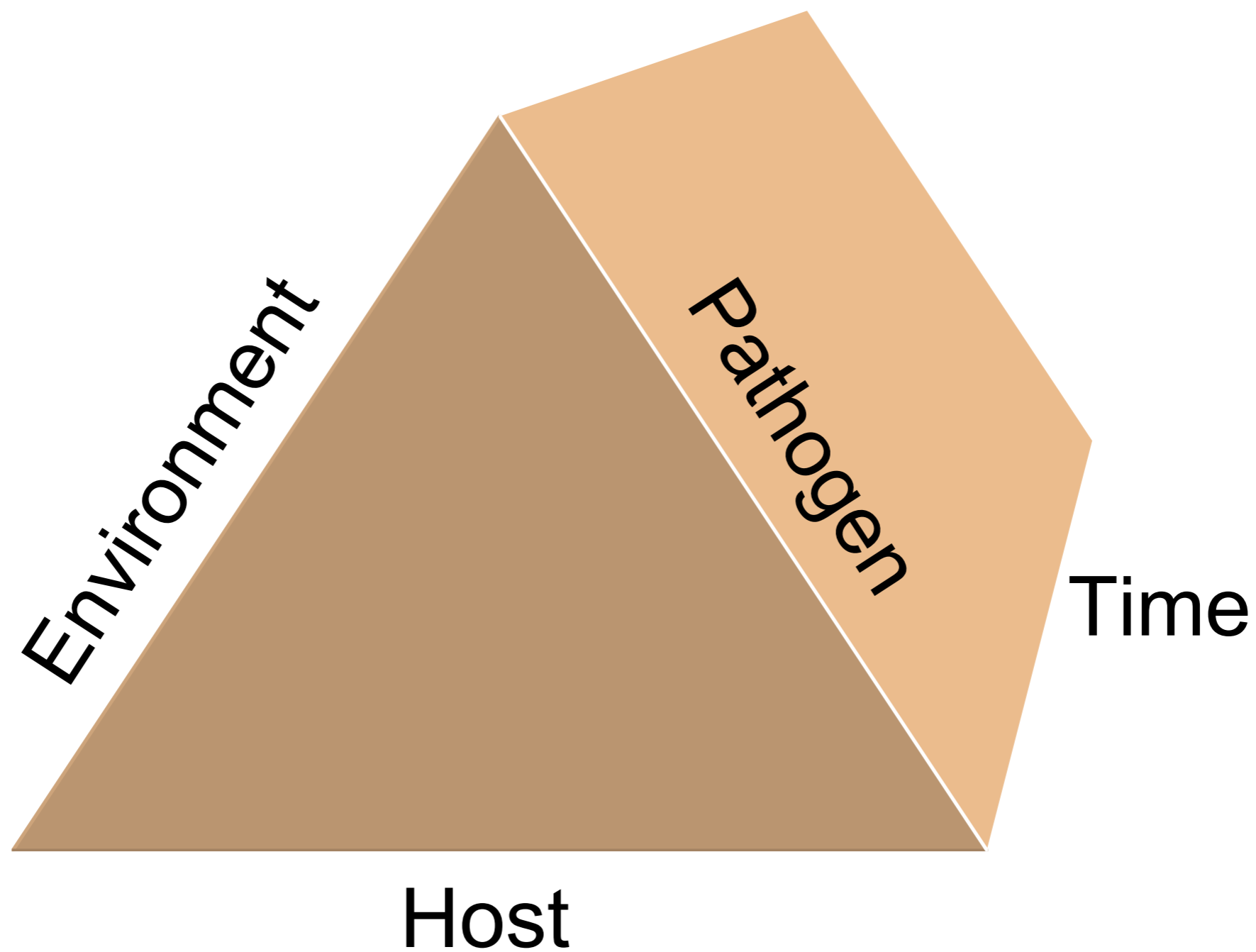
# Warm & Cool Season Pest Outlook

Brandon Horvath, Ph.D.  
Assistant Professor  
Turfgrass Pathology  
University of Tennessee

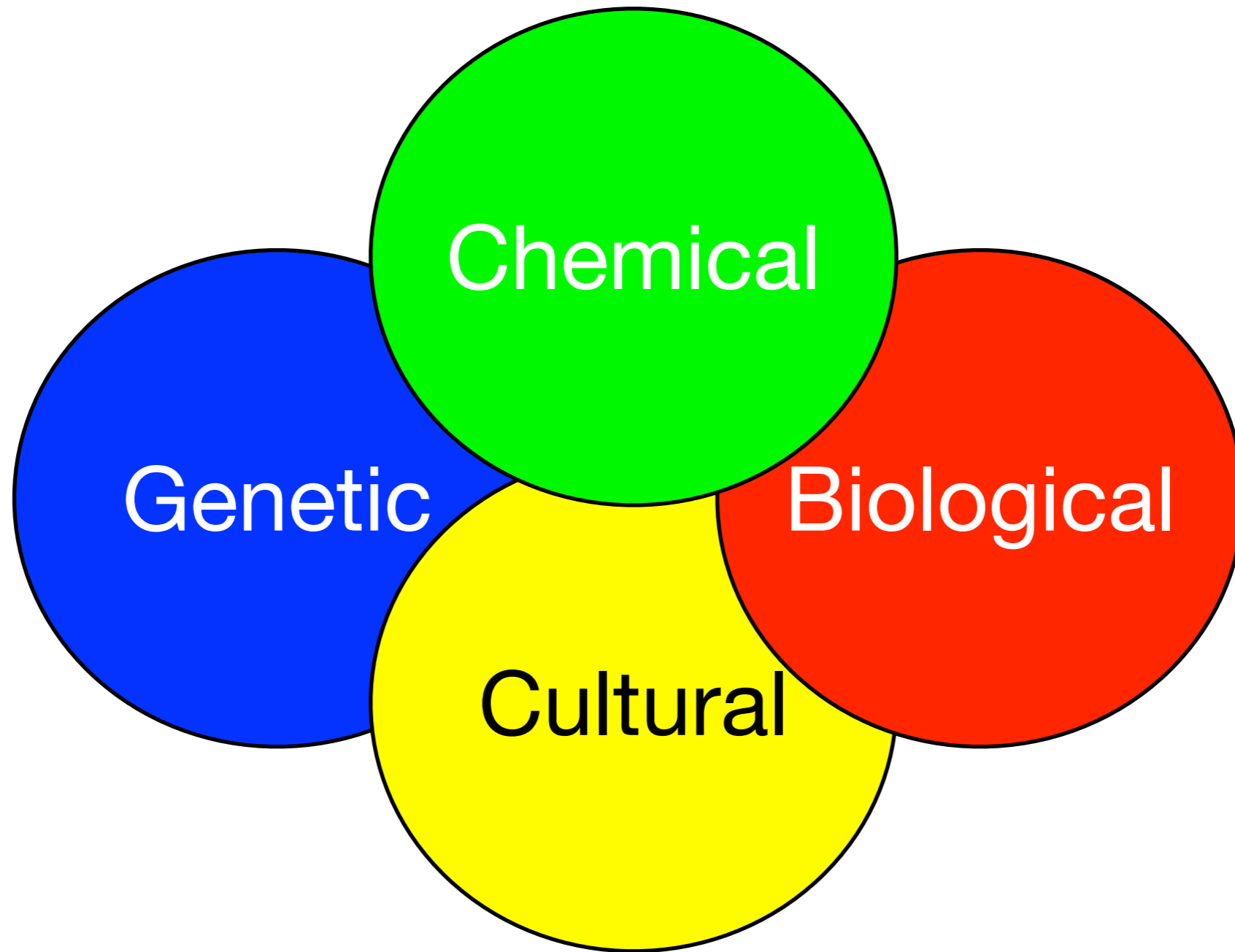




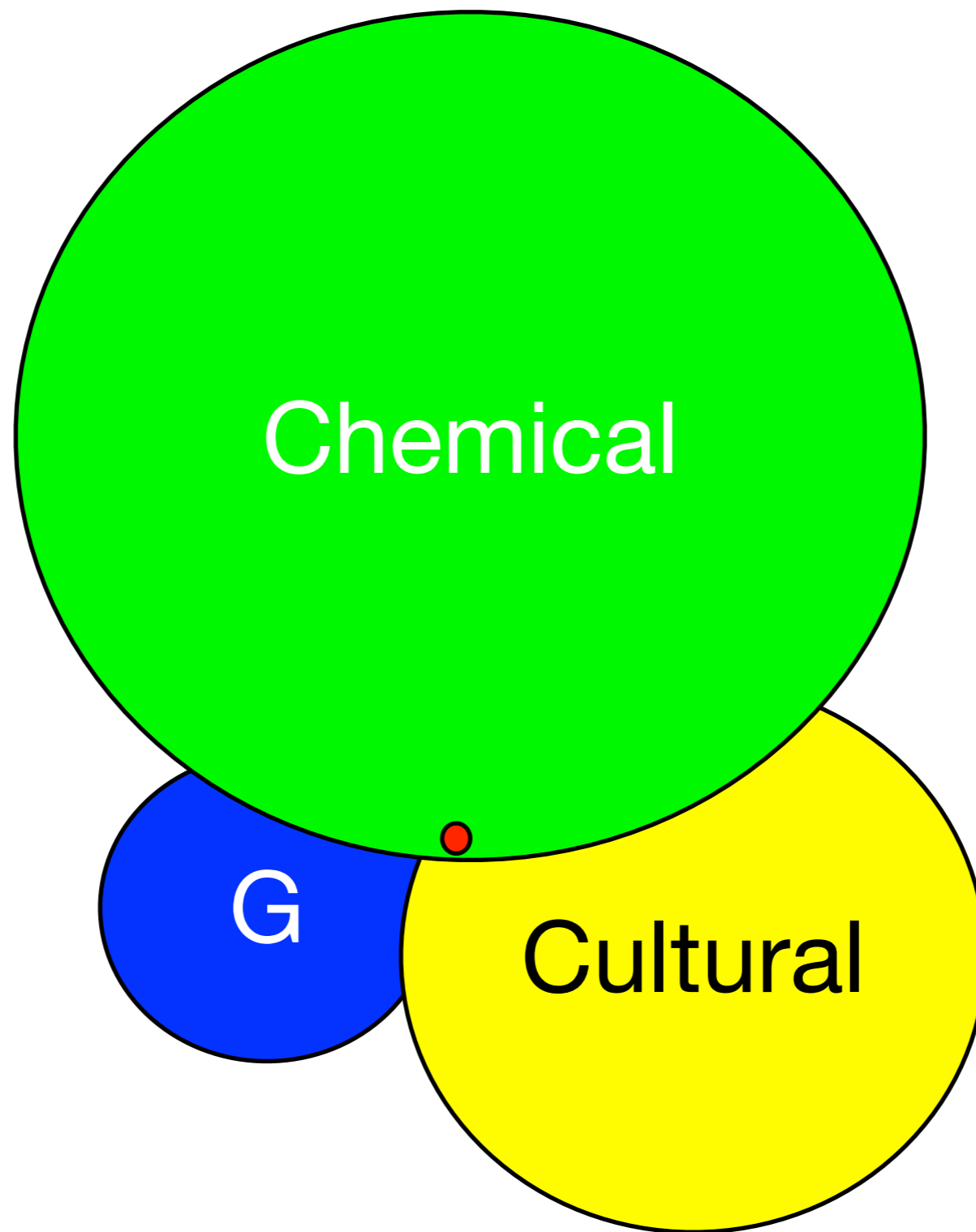
# Epidemiology Matters



# IPM Sounds Good in January



What Does it Look Like in June?



# **Integrated Turfgrass Health Management**

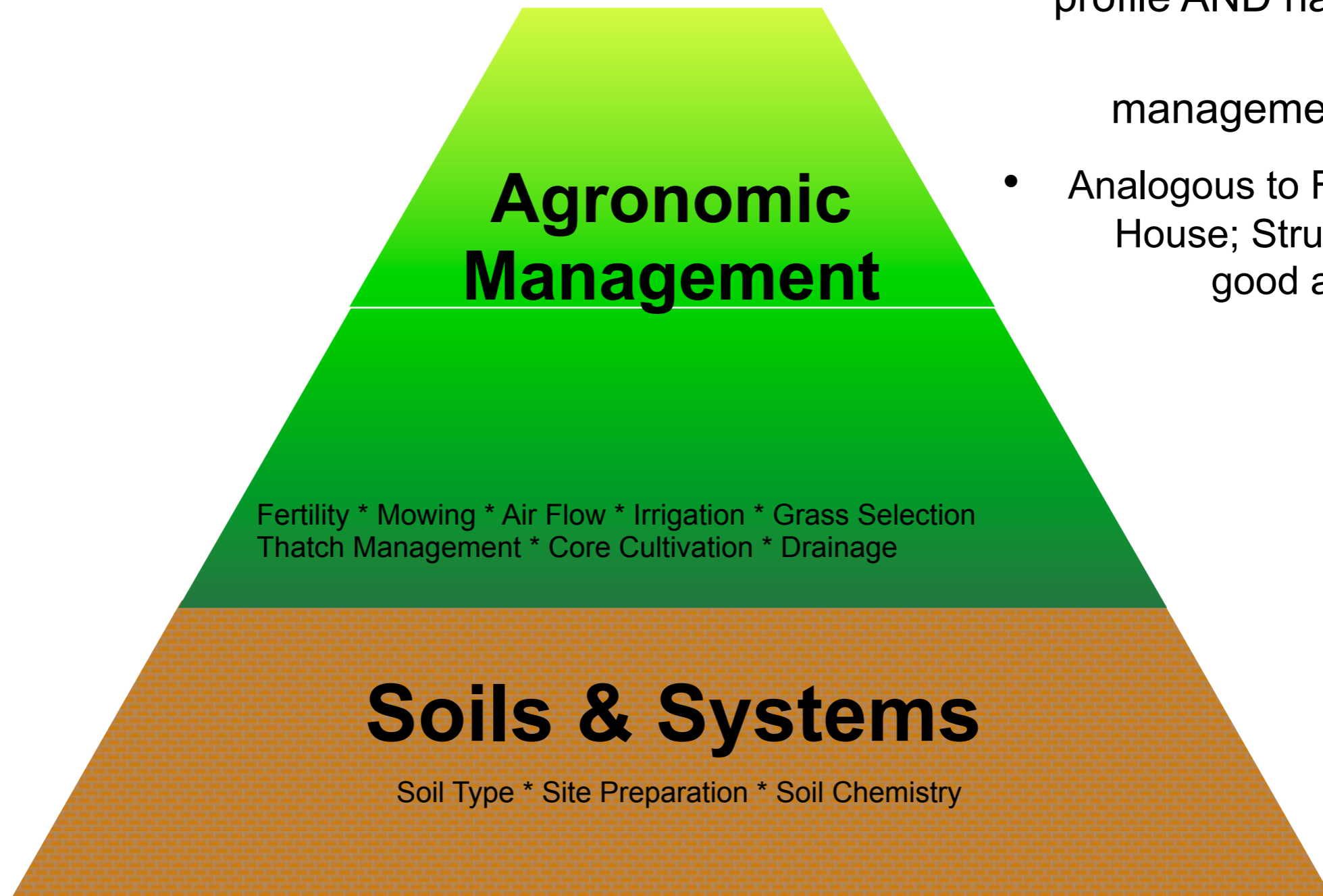
# Integrated Turfgrass Health Management

- The foundation of all Integrated Turfgrass Health Management Programs is a sound understanding of your SOIL profile AND having a solid agronomic management program!
- Analogous to Foundation in House; Structure only as good as foundation below.

## Soils & Systems

Soil Type \* Site Preparation \* Soil Chemistry

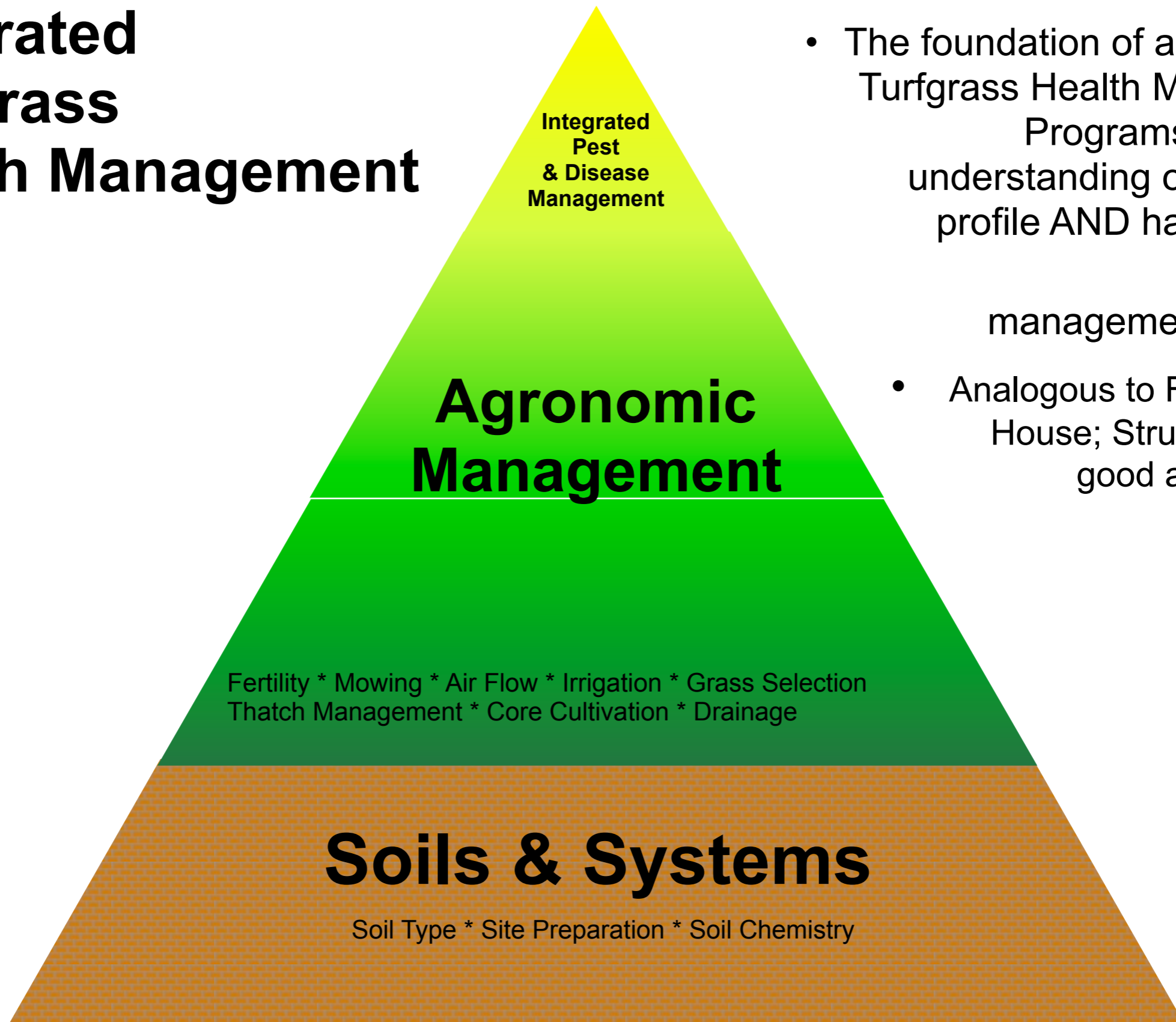
# Integrated Turfgrass Health Management



- The foundation of all Integrated Turfgrass Health Management Programs is a sound understanding of your SOIL profile AND having a solid agronomic management program!
- Analogous to Foundation in House; Structure only as good as foundation below.

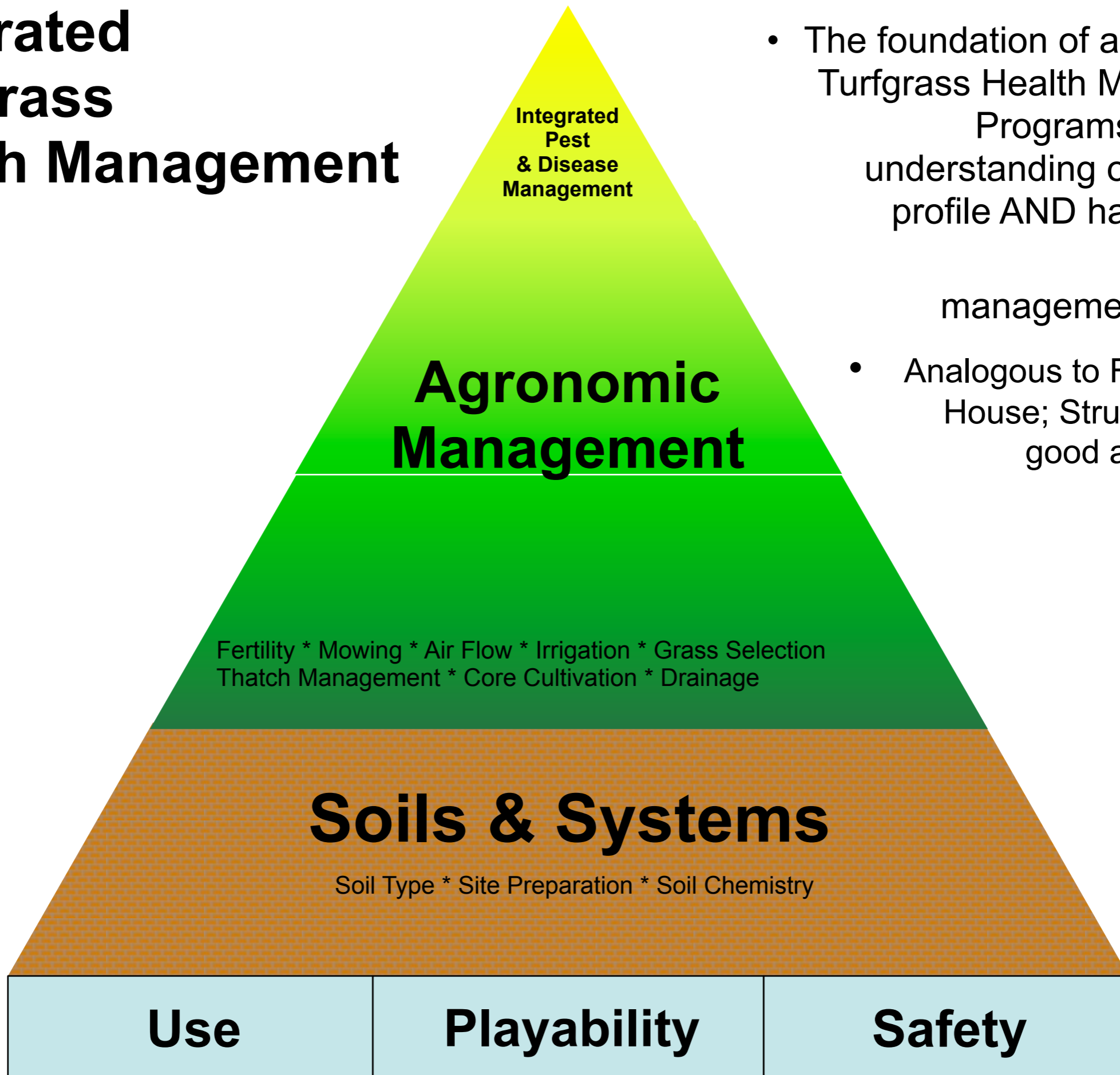


# Integrated Turfgrass Health Management

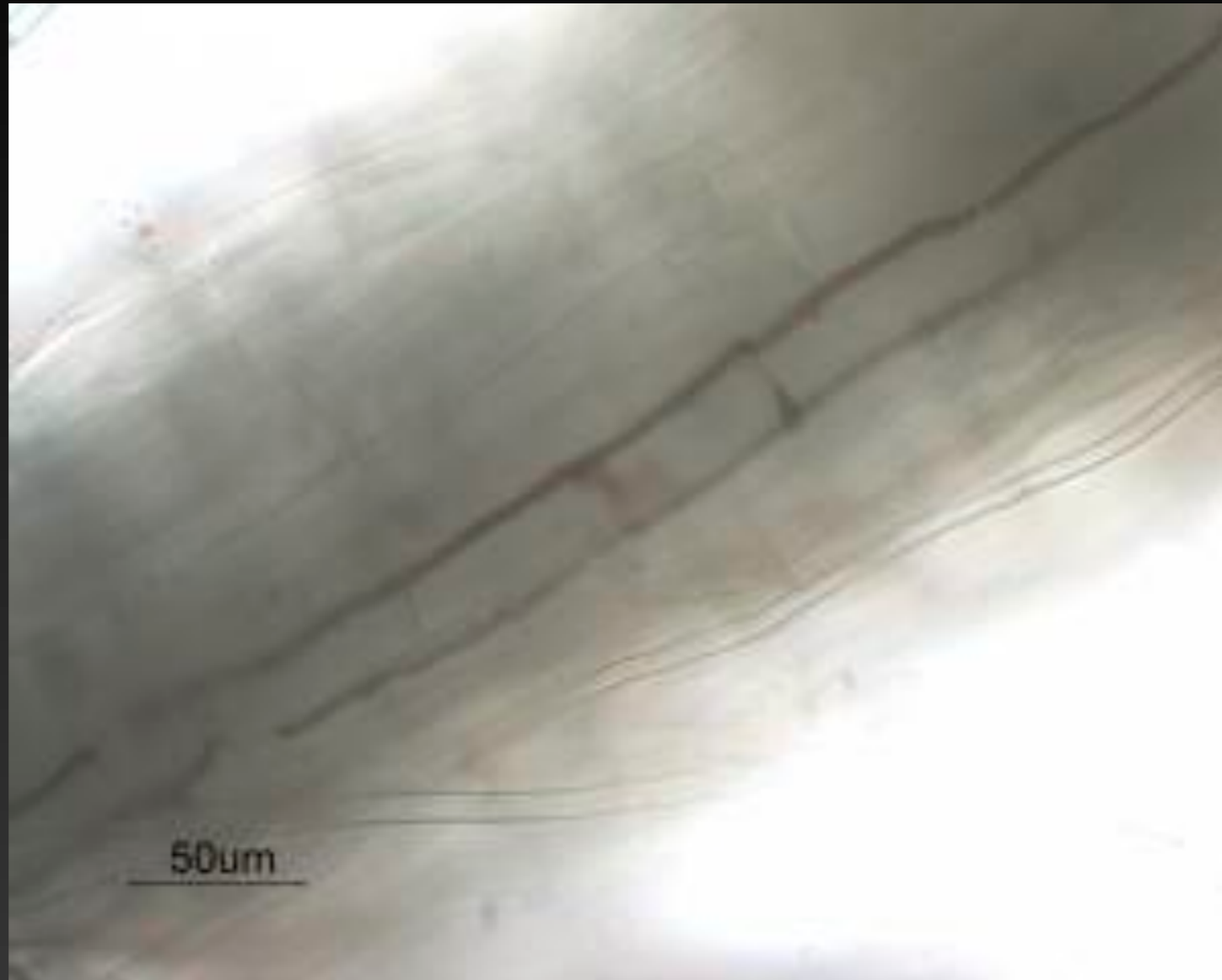


- The foundation of all Integrated Turfgrass Health Management Programs is a sound understanding of your SOIL profile AND having a solid agronomic management program!
- Analogous to Foundation in House; Structure only as good as foundation below.

# Integrated Turfgrass Health Management



- The foundation of all Integrated Turfgrass Health Management Programs is a sound understanding of your SOIL profile AND having a solid agronomic management program!
- Analogous to Foundation in House; Structure only as good as foundation below.



# Management

- Proper N fertility
  - Esp. @ Establishment!
- Manage weakened root system
- IT IS NOT ABOUT

Ph!

Treatment	Application rate (kg/ha)	Percent plot area injured	
		1984	1985
Ammonium sulfate	36.6 N	1.2 b <sup>z</sup>	0.0 a
Ammonium chloride	36.6 N	0.2 b	0.0 a
Urea	36.6 N	3.7 b	0.3 a
Sulfur 90G	36.6 S	4.7 b	6.0 bc
Sulfur 90G + ammonium sulfate	24.4 S + 24.4 N	1.2 b	3.0 ab
PMA 10L	0.3 Hg	4.7 b	1.3 ab
PMA 10L + sulfur 90G	0.3 Hg + 36.6 S	2.0 b	8.7 c
PMA 10L + ammonium sulfate	0.3 Hg + 36.6 N	0.3 b	1.0 ab
Untreated control	...	10.7 a	9.0 c

<sup>x</sup>Fertilizers and sulfur were applied three times on monthly intervals between October and December in 1983 and again in April 1983 and 1984. PMA alone or with either sulfur or ammonium sulfate was applied October and April 1984; and April 1985.

<sup>y</sup>Thatch samples were collected 26 July 1985.

<sup>z</sup>Means within a column followed by the same letter are not significantly different at  $P = 0.05$  according to the Duncan multiple range test.





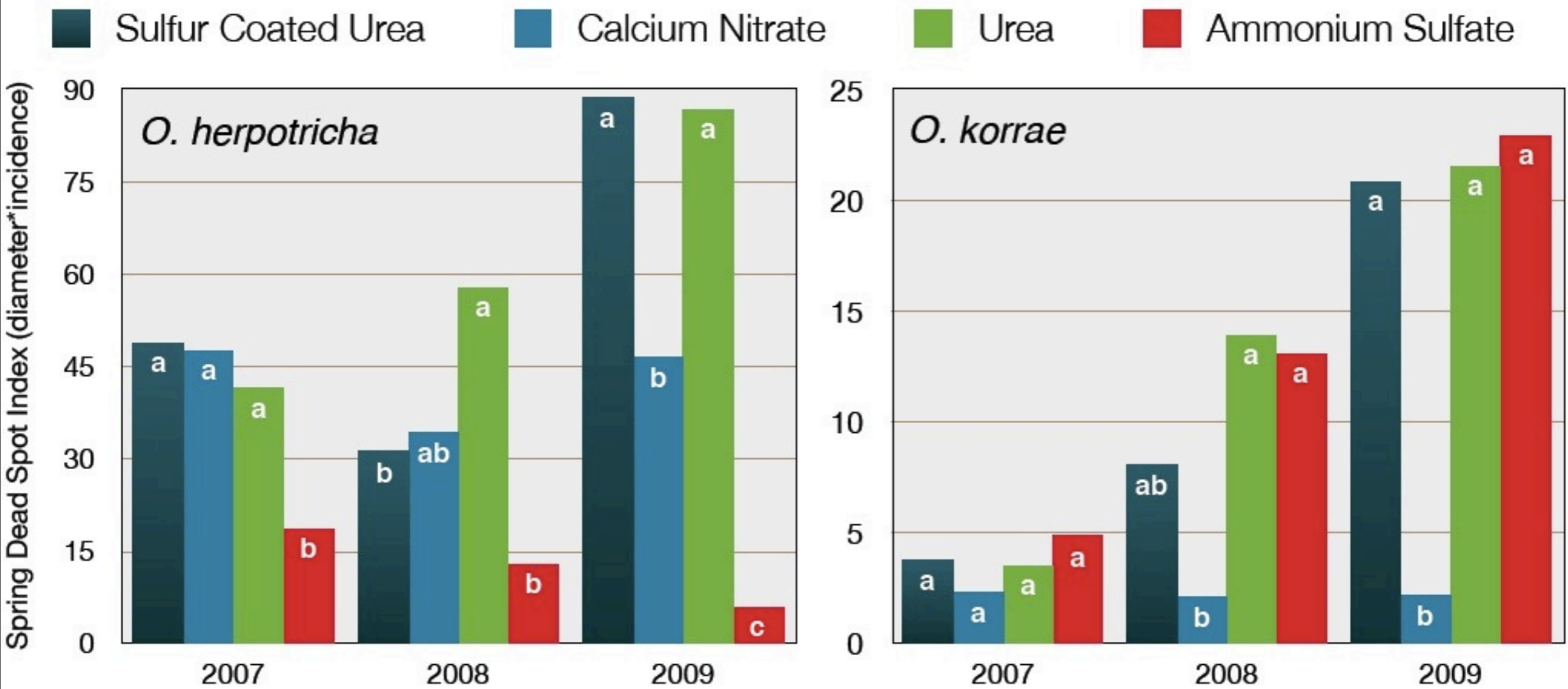


# Nitrogen on SDS



**Figure 4.** Response of spring dead spot caused by *Ophiosphaerella korrae* (left side of each plot) and *O. herpotricha* (right side of each plot) to nitrogen sources as observed in May 2009. Plots received **A**, urea; **B**, ammonium sulfate; and **C**, calcium nitrate as the sole nitrogen source in 2006, 2007, and 2008. Compared to urea, ammonium sulfate (B) provided excellent suppression of *O. herpotricha* but had no effect on *O. korrae*. In contrast, calcium nitrate (C) provided nearly complete suppression of *O. korrae* and only minor suppression of *O. herpotricha*.

Courtesy of LP Tredway



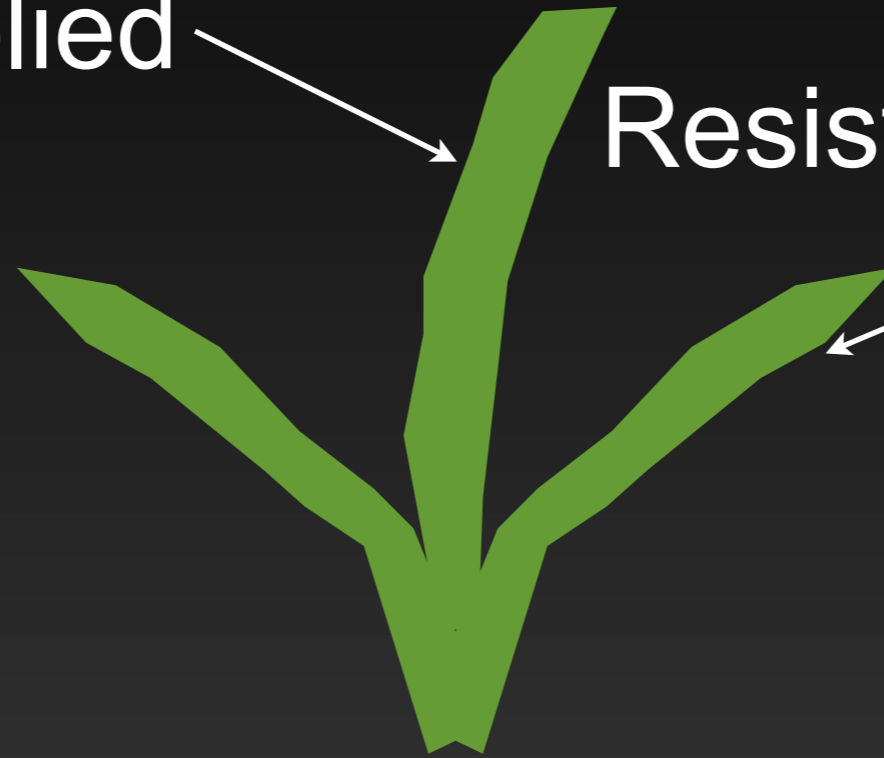
Courtesy of LP Tredway

# Daconil Action

- Combination product
- Daconil and Actigard
- Actigard- acibenzolar-S-methyl
- Systemic Acquired Resistance (SAR)

# SAR

Fungicide applied  
here



Resistance to disease  
here

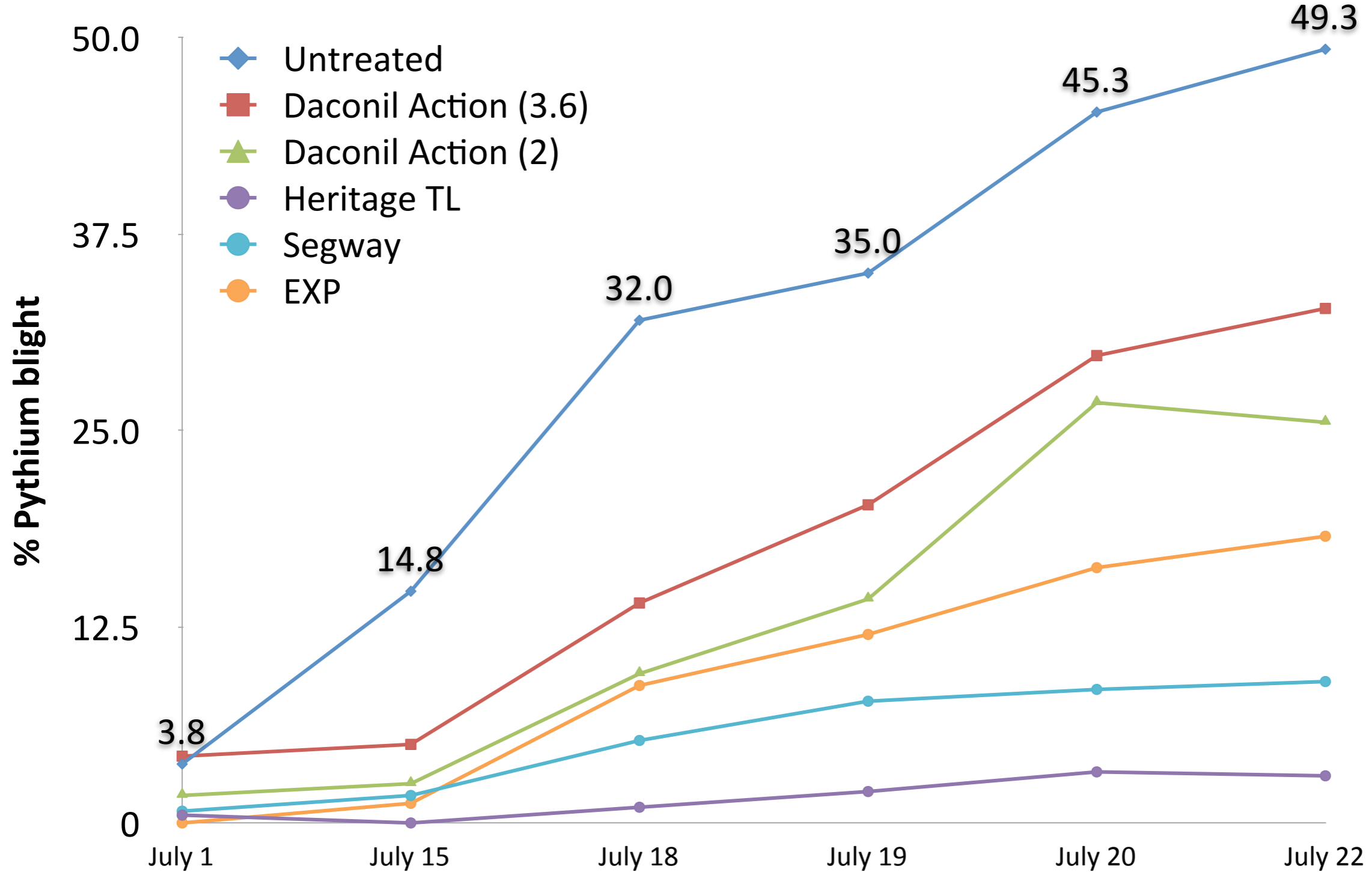
# Application Notes

- Palmer IV P. rye
- 2 lbs N/1000/mo
- irrigated 1 min 4X/day
- Applications made: June 17th, July 1st, July 15th

## Evaluation of *Pythium* blight control on 'Palmer IV' perennial ryegrass

Treatment Name	Rate per 1,000ft <sup>2</sup>	App. Interval
1 Untreated Control		
2 A7087	0.5 fl oz	14-day
3 Daconil Action	3.6 fl oz	14-day
4 Daconil Weather Stik	3.6 fl oz	14-day
5 A14658	6.0 fl oz	14-day
6 Heritage TL	2.0 fl oz	14-day
7 Segway	0.75 fl oz	14-day
8 Daconil Action	2.0 fl oz	14-day
9 Daconil Weather Stik	2.0 fl oz	14-day

# *Pythium blight control on perennial ryegrass – July 1-22*



15-Jul

Segway  
0.75 fl oz

Daconil Action  
2.0 fl oz

Daconil Action  
3.6 fl oz



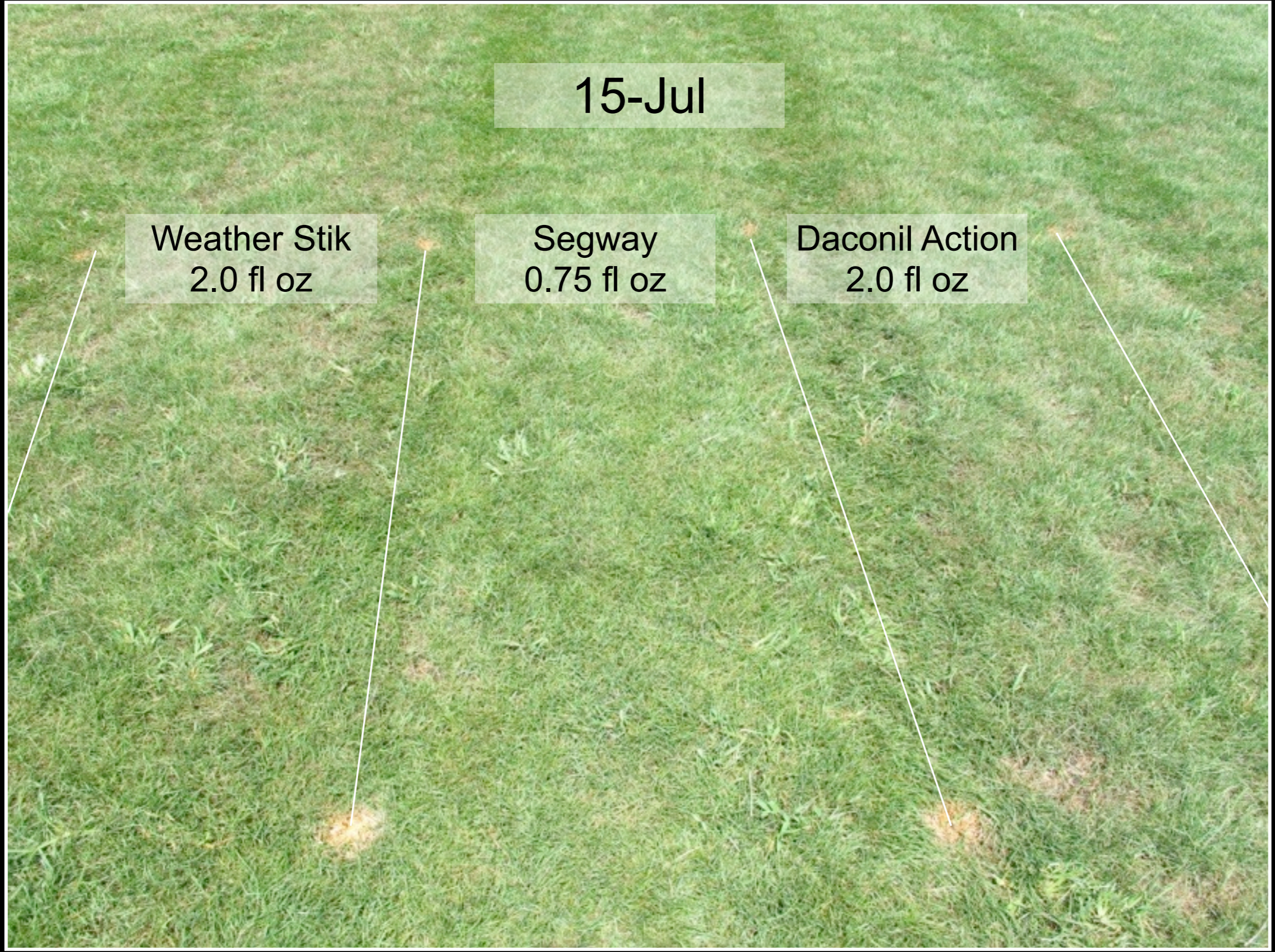


15-Jul

Weather Stik  
2.0 fl oz

Segway  
0.75 fl oz

Daconil Action  
2.0 fl oz



# Points to Consider

- Preventative strategy is best
- Don't rely on this product alone
- Best to apply when plants are not currently under stress
- Fits early season apps of Daconil in programs

# Velista

- Penthiopyrad
- New member of the SDHi class
- Similar to boscalid, flutoloniil
- Much broader spectrum

# Points to Consider

- Excellent new fungicide
- Broad spectrum activity
- Good for resistance management