



# TAKEAWAYS FROM SUSTAINABLE TURFGRASS MANAGEMENT IN ASIA 2026

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The Orchard Golf & Country Club

March 9-11 in Pattaya, Thailand



# Sustainable Turfgrass Management in Asia 2026



## Monday, March 9 @ Amari Pattaya

09:00-12:00, Seminars  
12:00-13:00, Lunch  
13:00-17:00, Seminars  
18:00-21:00, Conference dinner



**Ming-Yi Chou, Ph.D.**  
Assistant Extension Specialist and Professor in Turfgrass Pathology at Rutgers University, speaking about root-infecting fungi and the beneficial soil microbiome.



**Rebecca (Becky) Grubbs Bowling, Ph.D.**  
Assistant Professor and Extension Turfgrass Specialist at the University of Tennessee, delivering instruction on water planning & water use efficiency.



**Micah Woods, Ph.D.**  
President of ATC and PACE Turf, teaching about optimizing putting surfaces and the key physical and chemical properties of sand.

## Tuesday, March 10 @ Laem Chabang CC

08:30, Bus departure from Amari Pattaya  
09:30-11:30, Field day education sessions  
11-30-13:00, Lunch  
13:00-17:30, **Golf tournament** and concurrent sponsor education sessions  
18:00-20:30, Tournament dinner



**James Sua, CGCS**  
Director of Agronomy at Kuo Hua Golf Club. He will lead a session about autonomous mowers.



**Panuwat Nanrum**  
Golf course superintendent at Suwan Golf & Country Club, with a presentation about "Less coring, more profit."



**Phornthawon Phanbut**  
A Ph.D. candidate at Kasetsart University, she will teach about plant-parasitic & beneficial nematodes on golf courses in Thailand.

## Wednesday, March 11 @ Amari Pattaya

09:00-12:00, Seminars  
12:00-13:00, Lunch  
13:00-16:00, Seminars  
16:00, Conference ends



**Hazel P. Manarang**  
Senior golf course superintendent for Golfforce, Inc.: management tips for 3



**Sorawich Pongpiyapaiboon**  
Ph.D. candidate at University of Miyazaki: digital phenotyping

Please join us in Thailand for the next Sustainable Turfgrass Management in Asia conference. The educational program focuses on soil, water, grass types, playing conditions, and sustainability, featuring speakers from six countries.

The registration fee for this three day conference is THB 12,500 (or 9,500 for TGCSA members) and includes ALL educational sessions, 3 lunches, 2 dinners, coffee breaks and snacks, and transport to the field day. In 2026, we will have a golf tournament for the first time! There is an additional fee for those playing golf.

The conference will be held at the Amari Pattaya, with additional rooms available for conference attendees at Q70 North Pattaya and at This Pattaya



# A system for optimizing condition



**PREDICTIVE: Anticipatory Management.** Leveraging data to solve problems before they manifest, ensuring peak playing conditions 365 days a year.

**CONDITION-BASED: Targeted Precision.** Interventions are triggered by real-time turf health and soil metrics to optimize resource use.

**PREVENTIVE: Routine Consistency.** Scheduled maintenance reduces major breakdowns but may lead to over-servicing.

**REACTIVE: Operational 'Firefighting.'** Resources are spent responding to failures rather than preventing them.

# Data Driven Decisions: Level III *In Action*



PLAYING SURFACE QUALITY

## METRICS

Stimp and Firmness

## VALUE

- Ensures consistent playing experience



CLIPPING VOLUME ANALYSIS

Yield per m<sup>2</sup>

- Audits mower performance
- Monitors real-time growth rates



TOTAL ORGANIC MATTER

Soil testing and layering










- Controls water retention

# Measure your Clipping Volume...

Metric	Relationship to Clipping Volume	Impact of HIGH Volume
Green Speed	— (Inverse)	↓ Slower Speed
Organic Matter	+ (Direct)	↑ More thatch/Organic Matter
Surface Firmness	— (Inverse)	↓ Softer greens
Sand Requirement	+ (Direct)	↑ More sand needed

↑ Clipping Volume = ↓ Performance (Speed/Firmness) + ↑ Inputs Required(Sand)

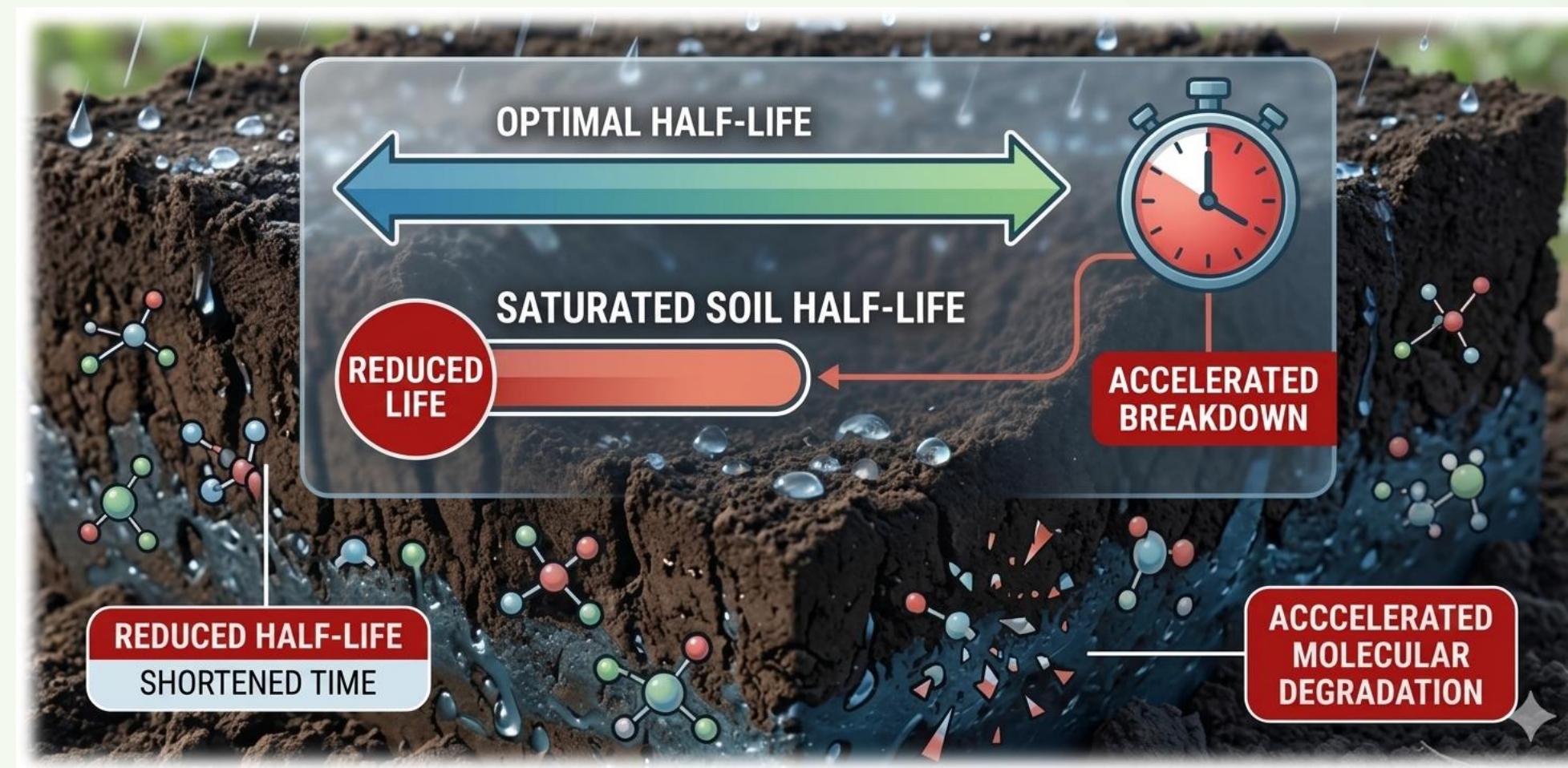
# Data Driven Decisions: Level III *In Action*

Indicator	Key Impacts	Suggested Intervention
 <b>High Clipping Volume</b>	 Green Speed  Organic Matter	<ul style="list-style-type: none"> <li>• <b>Reduce</b> Nitrogen rates</li> <li>• <b>Increase</b> PGR applications</li> <li>• <b>Manage</b> moisture (Keep as dry as possible)</li> </ul>
 <b>Low Surface Firmness</b>	 Softness / Sponginess  Thatch Accumulation	<ul style="list-style-type: none"> <li>• <b>Increase</b> topdressing sand</li> </ul>
 <b>Variable Growth</b>	 Inconsistent Ball Roll  Uneven Playing Surfaces	<ul style="list-style-type: none"> <li>• <b>Group</b> your greens and <b>apply</b> site-specific Nitrogen rates</li> </ul>

# Water Management: Finding the Balance

Precision **QUANTITY** + **High QUALITY** = Healthy Turf + Lower Costs

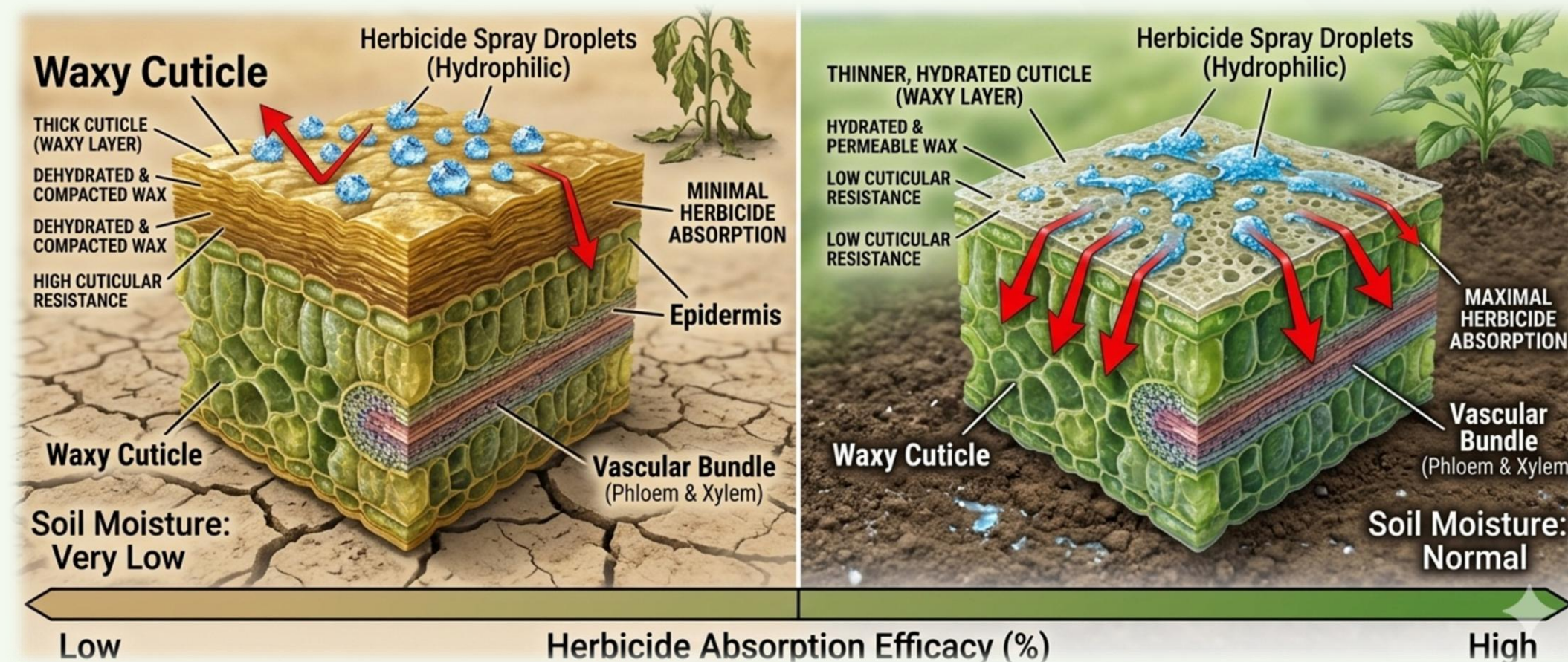
Applying exactly what the plant needs, reducing wasted pumping hours.



# Water Management: Finding the Balance

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# Water Management: Finding the Balance

Precision QUANTITY + High QUALITY = Healthy Turf + Lower Costs

Monitor your salts,  
bicarbonates,  
and pH

Check salinity  
hazard, sodium  
adsorption  
ratio, specific  
ions (B, Cl<sup>-</sup>,  
SO<sub>4</sub><sup>2-</sup>, NO<sub>3</sub><sup>-</sup>)

Table 1. Risk thresholds for key water-quality criteria.

	Low Risk	Medium Risk	High Risk	Very High Risk
Salinity Hazard (ECw; dS/m)	<0.75	0.75-1.50	1.50-3.00	>3.00
Sodium Hazard (SAR)	<10	10-18	18-26	>26
Carbonates (CO <sub>3</sub> <sup>2-</sup> ; ppm)	0-120	120-180	180-600	>600
Bicarbonates (HCO <sub>3</sub> <sup>-</sup> ; ppm)	0-15	15-90	90-500	>500

Sources: Ayers & Wescott, 1985; Richards, 1954; Harivandi et al., 1992

# Principles for effective and sustainable use of fungicides



**Prioritize plant health and cultural practices first**



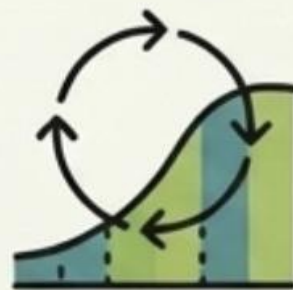
**Preventive (or early curative) application**

- Time it in between lag phase and exponential growth phase



**Know your disease and timing**

- Disease calendar

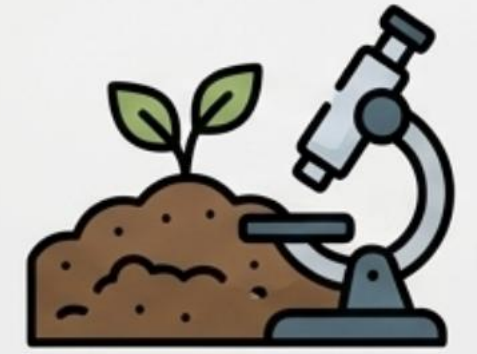


**Fungicide selection & rotation**



*Target minimum input of your fungicide to build resilience*

# Effects of fungicide on the microbiome



- Microbiome is the community of microbes which dictates soil processes
- Fungicides can eliminate beneficial microbes that provide natural biocontrol.
- Contact fungicide have a greater impact
- **Sweet spot** is within 0.5-0.6g/m<sup>2</sup>

Data-driven decisions allow us to optimize **every drop of water** and **every gram of product**, creating a world-class surface that works with nature, not against it.



**Thank you for listening!**