



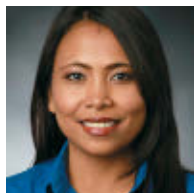
Practical Science For Stress

Few understand more clearly than golf course superintendents that living organisms, including turfgrass, are dynamic by nature. Superintendents spend much of their careers trying to understand and anticipate turfgrass needs to preempt negative reactions, while promoting positive reactions. Maintaining healthy turfgrass is a balancing act that demands constant attention to stresses and practical science-based tools.

Stress is inevitable, whether it's environmentally or mechanically induced. Disease, extreme temperatures or drought, low-mowing heights, reduced nitrogen rates and aerification create stress events in plants that require the use of more plant energy. When turfgrass uses energy during a stress event, it becomes further compromised and more susceptible to stress — creating the potential for a downward spiral.

If the turf is healthy, it's better able to endure the stress. Superintendents can't control Mother Nature but they can create better environments for turf growth using sound agronomic practices and practical tools to reduce stress, improve quality and manage pests, including disease.

Superintendents cannot afford to lose turfgrass in today's competitive environment. To help them improve turfgrass environments, BASF provides advanced



BY THAVY STAAL

tools, such as Insignia SC Intrinsic brand fungicide and Honor Intrinsic brand fungicide. Intrinsic brand fungicides are the industry's first fungicides labeled for disease control and plant health benefits, which help reduce the stress effects on turfgrass.

At BASF labs, researchers see turfgrass health improvements in test tube turf growth plots as well as in analyses that measure plant health at the biological level using microscope analysis and WinRHIZO tron root imaging and measurement studies.

On the course, superintendents can expect to see Intrinsic brand fungicide disease control and plant health benefits in the form of improved stress tolerance, plant vitality and healthier root cores, the literal foundation of healthy turfgrass. However, superintendents should keep in mind that just looking at root cores does not always show a visual difference between treated and untreated turf. An analysis utilizing WinRHIZO provides the most comprehensive results because measurements including

total root length and root length density can be derived.

BASF worked with numerous golf courses in 2010 to demonstrate these benefits and using WinRHIZO technology for analysis was included in the demonstration protocol.

Rotated within an integrated pest management plan, Intrinsic brand fungicides support the metabolic systems, defense responses, growth efficiency and overall health of turfgrass. It's practical science that gives superintendents plant protection value and peace of mind when stress arrives.

Learn more about Intrinsic brand fungicides at www.Intrinsic-PlantHealth.com and other BASF Professional Turf & Ornamentals innovations by visiting www.better-turf.basf.us. ■

Thavy Staal is marketing manager for BASF Professional Turf & Ornamentals.

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