

# Clark Talks Turf

■ TIMELY TURF ADVICE



## → Daconil Action Fungicide – A New Approach to Disease Control

Mike Agnew, Ph.D., is a senior field technical manager for Syngenta Turf and Landscape. Mike is active in the development of many of Syngenta's plant protectants, especially fungicides.

**Q Daconil Action is new to the turf market. What are the components of Daconil Action and why formulate a product in this fashion?**

The two components of Daconil Action fungicide are chlorothalonil and acibenzolar. Chlorothalonil is a familiar active ingredient to most superintendents and is a multi-site, contact fungicide. Acibenzolar, by itself, is highly active in stimulating a turfgrass plant's defense system in a process called Systemic Acquired Resistance (SAR). Acibenzolar has no direct activity on a fungal pathogen. Chlorothalonil provides surface protection of the plant and acibenzolar stimulates the plant to protect itself internally. The combination provides improved disease control above each component individually and is an effective tool in a disease resistance management program.

**Q What are the diseases that Daconil Action is most effective in controlling?**

Daconil Action provides enhanced control of dollar spot and anthracnose over Daconil WeatherStik. It also suppresses bacterial diseases such as bacterial etiolation (*Acidovorax avenae* subsp. *avenae*) and reduces

pythium blight caused by *Pythium aphanidermatum*.

Under light to moderate disease pressure Daconil Action at 1.6 oz./1,000 sq. ft. will provide equal or better control than generic chlorothalonil at 2.0 oz./1,000 sq. ft. This helps keep superintendents below the yearly limit of chlorothalonil applied that is required by the EPA. Daconil

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Action also increases the duration of control compared to Daconil WeatherStik, giving golf course superintendents extra disease protection when reapplication is delayed by uncontrollable events.

**Q What strategy do you recommend so a superintendent gets the most value from Daconil Action?**

There are five principles to follow:

1. Use in a preventive application program. Daconil Action needs to be

present 48 hours before achieving activation of the plant defense system.

2. Repeat Daconil Action applications on 14- to 21-day intervals, depending on disease pressure.

3. Adhere to EPA limits on the yearly maximum amount of chlorothalonil applied.

4. Know that Daconil Action can be safely tank mixed with other commonly used fungicides.

5. Read and follow all label directions.

**Q Are there any precautions superintendents should be aware of when applying Daconil Action?**

We have not observed any phytotoxicity in our research trials or from applications on golf courses.

**Q Anything else to add?**

Not all plant activators are the same. They each function differently and provide different benefits to the turfgrass plant. Acibenzolar is the only plant activator registered by FRAC (Fungicide Resistance Action Committee) as a host plant defense activator that induces the salicylic acid pathway in plants. This activation of the pathogenesis-related proteins in the salicylic pathway is known to enhance disease tolerance in plants.

Plant activators are well researched, dating back to the early 1900s when plant defense responses were first recognized. Acquired resistance was observed in 1933, and the first controlled lab studies were performed in the 1960s.

Clark Throssell, Ph.D., *Golfdom's* research editor, loves to talk turf. He can be reached at [cthrossell@questex.com](mailto:cthrossell@questex.com).