



# BAYER SOLUTIONS

## Summer Patch

### The Problem:

Summer patch, caused by *Magnaporthe poae*, is a root, crown and stem disease of annual and Kentucky bluegrasses, and fine fescues that develops under periods of plant stress during warm and hot weather conditions. As a root disease, it is difficult to control on a curative basis. Infections typically begin in the spring when soil temperatures are between 18-21°C with symptoms seen in the summer through fall.

### What to Look for:

Symptoms develop as circular patches or rings of chlorotic turf, 2.5 – 7.5 cm in size that can expand up to 0.5 – 1 m in diameter. On annual bluegrass greens, small patches may coalesce into larger, irregularly blighted areas. Initial symptoms on turf resemble those of drought stress, with leaves turning grayish green to reddish brown or straw colored. White bands may develop on leaves as a response to heat stress and damaged roots. Creeping bentgrass is usually not affected and will continue to grow in mixed stands with annual bluegrass, Kentucky bluegrass or fine fescues.

Roots, crowns and stems of infected plants will show a reddish-brown to dark brown coloration. Microscopic examination will show crown rot and extensive runner hyphae covering roots, especially in stages of advanced infection.

### Bayer Solutions:

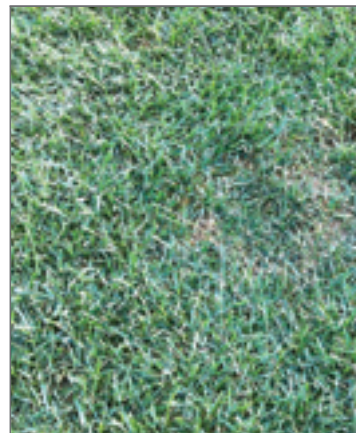
Summer patch must be managed by a combination of cultural and chemical controls. Disease is favored by hot, humid weather, high soil moisture, low mowing heights and soil compaction. Although high soil moisture creates conditions for infection,



Summer patch on a annual bluegrass/creeping bentgrass putting green. Photo: Dr. Derek Settle



Summer patch on an annual bluegrass green. Photo: Dr. Frank Wong



Summer patch on Kentucky bluegrass. Photo: Dr. Frank Wong

adequate irrigation and syringing are often needed to keep plants with damaged roots alive during summer conditions.

Key cultural controls include (i) relieving compaction with core aeration in the spring and fall, (ii) using ammonium fertilizers when applicable and (iii) maintaining soil pH between 5.5 and 6. Ammonium based, acidifying fertilizers appear to reduce symptoms, while nitrate forms increase severity; urea forms seem to have a neutral affect.

Preventive fungicide programs should start when average soil temperatures at a 5-10 cm depth are 20-23°C and should be maintained through late summer. Systemic fungicides like DMI's and Qol's have the best effectiveness

against summer patch and can be combined with anthracnose control programs. Since Qol resistance is present in many anthracnose populations, these applications will provide control of summer patch but another fungicide class will be needed for anthracnose control.

A key Bayer solution for summer patch in Canada includes Chipco Triton®. Triton provides DMI-fungicide control of anthracnose and summer patch with low plant growth regulation effects. StressGard™ Formulation Technology products reduce the stress conditions that promote summer patch. Chipco Triton® applications can control dollar spot and provide summer patch prevention simultaneously.

SOLUTION*	RATE PER 100 M <sup>2</sup>	INTERVAL
Chipco Triton®	32 ml	14-28 days

\*See fungicide labels for complete details. Always read and carefully follow label instructions.

## 2012 Michigan State University Data, Dr. J. M. Vargas

Treatments were applied preventively at 96 GPA. Triton applications were applied as Triton FLO® (25 ml = 37.3 ml Chipco Triton) on applied May 23, June 18 and July 17, other treatments were applied May 23, June 12, July 3 and July 24. Turf quality was rated 1-10 with 10 = best.

