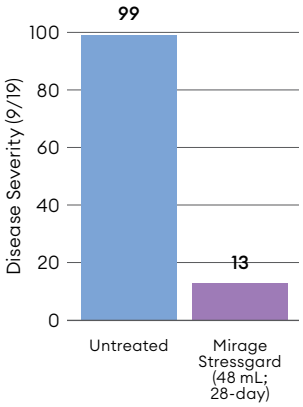
envu™ Golf

Summer Patch

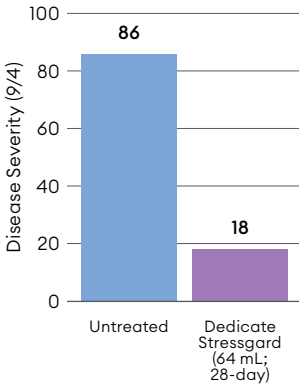
The problem

Summer patch, caused by *Magnaporthiopsis poae*, is a root and crown disease that begins to show aboveground symptoms during periods of summer stress. Among the grasses that are most susceptible to infection are annual bluegrass, Kentucky bluegrass and fine fescues. Although much less common, older varieties of creeping bentgrass can also develop symptoms of summer patch. Initial infection will typically begin as soil temperatures rise above 18 °C during late spring. Peak symptom expression is most commonly observed under hot summer temperatures and extended periods of plant stress.

Summer Patch – Kentucky Bluegrass



Rutgers University, 2014



Rutgers University, 2017

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 yellow-orange to reddish brown before appearing straw coloured. Outer edges of the patch remain yellow-orange and indicate active pathogen activity. Creeping bentgrass is usually not affected and will continue to grow in mixed stands with annual bluegrass, Kentucky bluegrass or fine fescues.

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

Envu solutions

Summer patch must be managed by a combination of cultural and chemical controls. Disease is favoured by hot, humid weather, high soil moisture, low mowing heights and soil compaction. Although high soil moisture creates conditions for infection, 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 aerification in the spring and fall, (ii) using ammonium fertilizers when applicable, and (iii) maintaining soil pH between 5.5 and 6.0. Ammonium-based, acidifying fertilizers appear to reduce symptoms, while nitrate forms increase severity; urea forms seem to have a neutral effect.

Preventative fungicide programs should start when average soil temperatures at a 5–10 cm depth are 18–21 °C and should be maintained through late summer. Systemic fungicides like DMIs and QoIs have the best effectiveness against summer patch and can be combined with anthracnose control programs.

Two Envu solutions for summer patch include the DMI fungicide Mirage® Stressgard® and Dedicate® Stressgard® (a combination product including DMI and QoI chemistries). These two products provide control of summer patch, dollar spot and anthracnose with low plant growth regulation effects. Mirage Stressgard applications can control dollar spot and provide summer patch prevention simultaneously.

Solution	Rate per 100 m^2	Application interval* (days)
Mirage® Stressgard®	32–64 mL	14–28
Dedicate® Stressgard®	32–64 mL	14–28

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

Summer patch on an annual bluegrass/ creeping bentgrass putting green.
Photo: Derek Settle, Envu

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

An annual bluegrass plant affected by summer patch showing extensive root and crown rot.
Photo: Frank Wong

Summer patch on fine fescue roughs.
Photo: Jesse Benelli, Envu

To talk about your specific needs or to learn more about our solutions, please contact an Envu representative.

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