



Snow Mould

Bayer Solutions

// THE PROBLEM

Pink and grey snow moulds are devastating turf diseases that occur on golf course putting greens, tees and fairways in the presence of snow cover. These diseases are not only unsightly in the spring but can leave the turf surfaces unplayable. Both pink and grey snow moulds can affect all cool-season turfgrasses but tend to be more problematic on annual bluegrass and bentgrasses.

// WHAT TO LOOK FOR

Pink snow mould, caused by *Microdochium nivale*, occurs in cold (0-10°C), wet weather with intermittent periods of snow cover (less than 60 days). Symptoms are visible at snow melt as tan patches 5-30 cm in diameter with a pink border. The affected areas change in colour to a whitish grey with leaves taking on a bleached appearance. Individual patches may coalesce, resulting in extensive damage to the turf.

Grey snow mould, caused by *Typhula* sp., is active at 0-5°C with extended snow cover (greater than 80 days). Symptoms appearing at snow melt are light yellow to grey discoloured areas ranging from 7-30 cm or more in diameter. Matted turf progresses quickly to a greyish-white colour. As patches enlarge, a 1-inch halo of greyish-white mycelial growth can appear at the surrounding margin. Individual patches may coalesce to form large affected areas. The key diagnostic feature is the presence of small, round, hardened sclerotia (chestnut brown for *Typhula incarnata* and black for *Typhula ishikariensis*). Pink snow mould can be distinguished from grey snow mould by the absence of these characteristic sclerotia.

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Implementing proper cultural practices will assist in reducing disease severity. Management strategies include: avoiding late fall fertilization that leads to lush growth, controlling excessive thatch, removing tree leaves from the turf, controlling drifting snow, and removing snow/improving drainage to promote rapid drying in the early spring.

A pre-snow preventive application is critical for protecting vulnerable turf areas from snow mould. While disease symptoms develop under snow cover, sclerotia begin to germinate in the fall at 10-18°C. An additional application during this time period has been shown to reduce disease severity the following spring. After your last mowing of the season but prior to snow cover, a final fungicide application is needed. Products or mixtures containing two to three different active ingredients like Dedicate™ Stressgard® have been shown to provide exceptional snow mould control.



Bayer relies on rigorous internal and external snow mould research to provide confidence in our solutions.



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Solution	Use Rate Per 100 m ²	Application Interval*
Dedicate Stressgard	32 - 64 mL	Make 1 to 2 applications in the fall in areas that receive < 100 days of snow cover
Mirage™ Stressgard®	30 - 64 mL*	1 - 2 applications late fall at 14 - 28 day intervals before snow cover
Compass® 50 WG	3.8 - 6.1 g**	Late fall before snow cover or early spring after snow melt

* Best as a clean-up application - must be tank mixed with other products for complete control.

** Best as a clean-up application - should be tank mixed with other chemistries for complete control.

The following table shows recommended products or mixtures for greens, tees and fairways based on the type of snow mould and length of snow cover expected.*

	Less than 90 Days (pink)	90 to 150 Days (pink + grey)
Greens & Tees	Dedicate Stressgard (48 - 64 mL)	Dedicate Stressgard (64 mL) + Chlorothalonil or Fludioxonil
Fairways	Dedicate Stressgard (32 - 64 mL)	Dedicate Stressgard (48 - 64 mL) – 2 fall applications

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



Grey snow mould symptoms with fungal mycelium around margin of infection.
Photo: Derek Settle, Bayer.



Snow mould symptoms showing bleached-out dead turf after snow melt.
Photo: Paul Giordano, Bayer.



Pink and grey snow mould symptoms in a research plot.
Photo: Frank Wong, Bayer.



Blighted turf showing small dark sclerotia of *Typhula ishikarensis* (grey snow mould).
Photo: Frank Wong, Bayer.



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ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.

Bayer, the Bayer Cross, Dedicate® Stressgard®, Mirage™ Stressgard®, Compass® 50 WG and Stressgard Formulation

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