

Anthracnose risks rising

Turf Science LITE

Rising temperatures could trigger damaging Anthracnose attacks on turf quality again this summer. A number of the stress factors that increase the frequency and severity of Anthracnose outbreaks - including heat, drought and nutrient deficiency - have become more pronounced in recent seasons.

Anthracnose (*Colletotrichum graminicola*) is the second most common disease on turf and widespread across the UK. The problem has been getting progressively worse in recent years.

Possible reasons for increased Anthracnose issues:

- Higher average summer temperatures favour aggressive attacks
- Deficient nutrient levels increase susceptibility
- Lower cutting heights add stress on plants
- Greater player demands quickly highlight surface quality loss

Foliar blight

Infects leaves, causing tan/yellow irregular patches. Most common in summer and can be confused with symptoms of drought. Favoured by hot, humid weather.

Basal rot

Principally attacks the crown, but causes older leaves to yellow and die. Young leaves may go red. Used to be more prevalent in autumn and winter but is now regularly seen throughout the summer, especially during periods of heat and drought stress.

Anthracnose can occur as Basal rot in cool, wet weather through late autumn and winter, but in summer it's the Foliar blight infection that gives rise to irregular patches of tan-yellow infection which affect surface playing quality, and can result in extensive die-back with bare patches.

One of the main issues for identification and control is that the summer symptoms of disease can be confused with drought stress on plants. By the time watering has been tried and the turf is still dying, it's too late for control. In fact, surface watering affected turf will raise humidity that can make the situation worse.

Anthracnose high risk situations:

↑ High proportion of <i>Poa annua</i>	↑ Areas of high wear and compaction
↑ Drought stress	↑ Insect or nematode feeding damage
↑ Inadequate nutrition	↑ Excessively low cutting height

Stress related disease

Key to preventing Anthracnose attack is to minimise stress on the plant. The underlying populations of disease pathogen, which are present in most thatch layers and at the base of turf plants, can quickly flare up when turf is stressed.

Integrated Turf Management options for Anthracnose include:

- Alleviate compaction and reduce excess thatch
- Ensure adequate moisture for healthy plant growth without over watering

- Provide adequate and appropriate nutrition
- Encourage less susceptible turf species such as fescue and bent grasses
- Promote plant health and vigour

Pre-stress conditioning

Pre-stress conditioning aims to build up reserves within plants that enable them to better withstand stressful periods which can be a precursor of Anthracnose attack. Trials have shown beneficial effects of pre-stress conditioning with Primo Maxx include increasing the root mass, building up plant reserves and promoting turf health and quality.

Greenkeepers also report the enhanced turf density of Primo Maxx treated turf enables them to raise cutting height, by 0.5 to 1mm, whilst still maintaining green speed, improved smoothness and better consistency through the day. This clearly meets the demands of today's players for surface quality, and alleviates stress on the plants that would reduce susceptibility to Anthracnose.

Water management

Anthracnose will develop faster in humid conditions, with possibly the worst scenario being a wet thatch layer in hot weather; aeration to remove thatch and improve air flow is important. Additionally, using the new Qualibra wetter and water management technology will help to move water away from the surface, to maintain a firm playing surface, and hold the soil moisture deeper and more evenly through the soil profile.

Holding water deeper and evenly facilitates more efficient irrigation scheduling using less frequent deep watering, which can reduce Anthracnose risk. Roots also grow more effectively in the deep areas of water retention, to reduce stress and promote turf health.

Nutrient supply

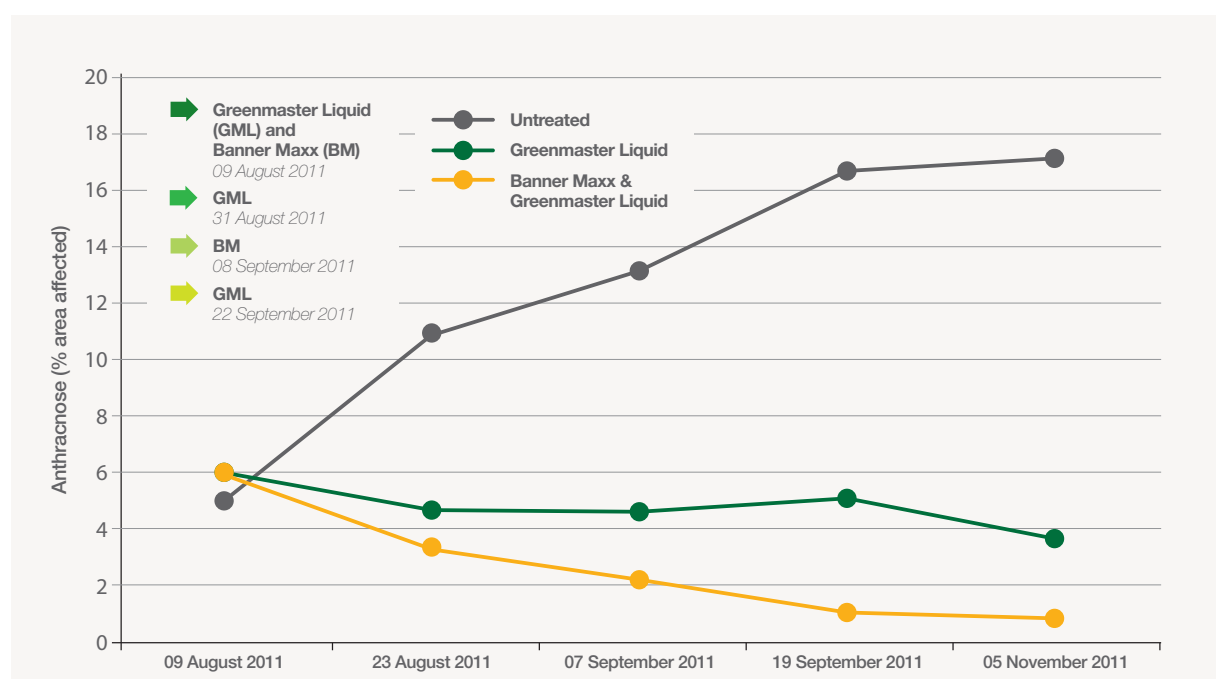
Nutrient deficiency is undoubtedly one of the primary precursors on Anthracnose attack. The reduction of fertiliser use in recent seasons may be one of the reasons the disease has become more prevalent.

Maintaining appropriate balanced nutrient inputs throughout the season is imperative for turf health. New Everris trials have also shown that a fast-uptake liquid fertiliser can give very effective reductions in the incidence of summer Foliar blight Anthracnose.

Applying a fungicide during periods conducive to Anthracnose development can help minimise outbreaks and effects on turf quality. Effectively reducing the pathogen population lowers the risk and can enable plants to remain healthy through a stressful period.

All Syngenta fungicides are approved for use on managed amenity turf and amenity grassland. Select the most appropriate activity to prevailing weather and turf growth conditions.

Combined action



New research, undertaken with extended replicated trials at the STRI and supported by R&D at Everris and Syngenta research facilities, has demonstrated that a rapid response with fast uptake fertiliser and fungicide inputs can effectively minimise damage from Anthracnose.

Why are we seeing improved results with combined fast acting nutrition and fungicide applications?

- A healthy plant with correct nutritional status promotes better uptake of active ingredient
- Providing instant relief of nutritional stress promotes healthier turf
- When disease is active, fast acting products work quickly before damage occurs in the turf sward
- The formulation technologies of Greenmaster Liquid and Banner Maxx help both products to work quickly and more efficiently
- The two products together improve turf health, including chlorophyll content, turf colour and, ultimately, turf quality

Recommendations timeline

Mid-July – early August (or at first signs of disease)	21 – 28 days after first application	35 - 42 days after first application
Greenmaster Liquid* - Spring and Summer (80 l/Ha)	Greenmaster Liquid* - Spring and Summer (80 l/Ha)	Greenmaster Liquid* N – K (80 l/Ha)
Banner Maxx (3 l/Ha)	Banner Maxx (3 l/Ha)	
Tank mix	Tank mix	

*This can be adjusted as appropriate within the label rates of 40-120 l/ha according to nutrition status.

For more information click here to download the latest Turf Science in Action report: [An integrated approach to Anthracnose control](#)



- Use weather trends and forecasts to identify potential risk periods
- Adopt ITM practices to reduce risk
- Avoid stress on turf as far as practically possible
- Alleviate stressful conditions quickly
- Apply well-timed fungicide applications starting when conditions are favourable for disease infection, at the very beginning of disease symptom expression.

For a free local five-day forecast of impending Anthracnose risk, that can give time to take mitigating action, visit the website: www.greencast.co.uk or www.greencast.ie – which includes further advice and information for Integrated Turf Management disease control.