

Identifying Turf Diseases

Anthracnose usually attacks *Poa annua* species (although Bent grass is also susceptible). Normally occurs during late summer following stress caused by factors such as high temperatures, low fertility, dry soil and compaction, although is also frequently seen during other periods of the year. Likely to occur under high humidity. The main symptom is irregular-shaped and sized patches in which leaves initially yellow then develop a reddish colour following wilting. Diseased plants may be easily removed from the sward and the black rotted plant base easily seen - a highly characteristic symptom of anthracnose disease.

As far as possible, compaction should be managed by reducing wear over an affected area e.g. keeping the heavy machinery off the turf for a while during high infection periods. A regular and varied aeration program is essential. In the summer months anthracnose may be discouraged by appropriate nitrogen and potassium applications but do not apply fertiliser in the winter months as this could lead to severe outbreaks of fusarium patch disease. Fungicides such as Daconil Turf can be used successfully for the control of anthracnose in turf. Applications prior to severe attacks will help to keep disease under control.



Anthracnose



Brown Patch

Brown patch is a relatively uncommon disease but has been increasing in recent years. Occurs during summer, the weather is humid and if the soil is thatchy and poorly drained. Symptoms are rapidly enlarging circular or irregular patches up to 0.5m in diameter. A dark purplish or greyish border may be visible in early morning. Sometimes turf recovers from the centre, resulting in a ring of diseased turf. Brown Patch can be prevented by regular scarification, if necessary, to reduce water-holding thatch. As brown patch is favoured by high nitrogen fertilisation, applications should be light and frequent rather than in one large application. Heritage and Daconil fungicides are used in the USA against the disease but are not on the label in the UK so are used at users own risk. The disease can spread rapidly, fungicide must be applied promptly at the first signs of the disease.

This occurs mid-spring to early autumn when an extended period of leaf wetness will encourage the disease. High day temperatures and cool nights add to susceptibility. Most likely when nitrogen fertility is low and growth is poor. Varieties of red fescues, particularly slender creeping red fescue are the most susceptible grass species. Also those fescues found in sea-washed turf.

The main symptoms are numerous small (no more than 50mm) bleached spots which may coalesce to form larger, irregular patches. Infected leaves appear water-soaked at first, then bleached. Leaf lesions have a characteristically bleached white centre with a reddish-brown border. White 'cotton wool' mycelium may be noted in early morning. Recovery is usually rapid, as roots are not affected.

Maintaining adequately fertility is often the easiest method of preventing attacks of dollar spot. Fungicides such as Daconil Turf will give good control of dollar spot.



Dollar Spot



All turf species are susceptible. This occurs all year round but most obvious in the drier parts of the year. Common in thatchy sandy soils under an infrequent watering and fertilising regime. Rings or arcs of stimulated turf growth, ranging from a few centimetres to many metres in size. May cause turf death by soil water repellency and/or toxic substances. Sometimes produces rings of toadstool or puffball fruiting bodies. Note: The turf grass is not affected directly, but is influenced by the rapid breakdown of soil organic matter.



Fairy Ring



Fusarium Patch

Fusarium or now named Microdochium patch normally occurs in the autumn, early spring during cool humid weather, although can occur at most times of the year. It is encouraged by high nitrogen fertility and thatchy poorly drained soil. The main symptom is rapidly developing circular patches of 25-50mm diameter. Leaves become brown and mushy. Sometimes pink or white cobweb-like fungal threads can be seen in early morning.

Fescue and Bent grasses are much more resistant to the disease. Moisture control to avoid humid surface conditions will do much to prevent disease attack. This can be achieved by attention to drainage and ensuring free movement of air over the turf surface. Regular aeration and regular applications of appropriate top dressing material will make the surface less moisture-retentive, wetting agent application can also help.

Reduction of water holding thatch is also beneficial. The return of clippings provides a substrate for disease development, so catch and remove the grass. Care should be taken when applying fertilisers as excessive nitrogen combined with cool wet weather can lead to severe disease outbreaks. The regular use of alkaline reaction fertiliser and other products should also be avoided.

Occurs during warmer seasons. Turf under drought stress, high nitrogen and a close mowing regime is most susceptible, especially if the foliage remains wet for an extended period.

The main symptoms; these pathogens commonly cause disease in complex with other fungal pathogens. Affected turf exhibits a general browning and melting out (thinning) resembling damage from drought. A closer inspection may show die back of the leaf tip, with the browning gradually extending down the leaf and subsequent shrivelling. Circular lesions with dark brown margins and tan centres may be seen on the leaf. The crown and sheath can rot, which can result in a thinning of the turf.

It is difficult to give general advice about leaf spots and melting out. A broad spectrum fungicide may prove effective. Take a sample of the grass to your Scotts technical advisor for specific advice on control measures.



Leaf Spot (and melting out)



Red Thread

This can occur anytime of the year, in shady, poorly aerated compacted soils and a lack of Nitrogen. The main symptoms are irregular patches of light brown or bleached leaves covered with distinctive 'red threads'. Pink patch lacks the characteristic 'red threads'. Instead leaves may become coated with pink mycelial growth. Whilst red thread may occur alone, it often occurs as a disease complex with pink patch. Severe outbreaks may kill the grass but generally affected turf will recover adequately.



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Slime Mould

This does not cause any turf damage. It occurs mid autumn to mid spring. Favourable conditions are cool, wet weather which promotes fruiting body formation. They quickly disappear in dry weather. More common in thatchy turf. The main symptom is masses of pinhead-sized, rounded fruiting bodies suddenly appear on leaves during cool, humid conditions. Fruiting bodies can be of various colours, but are most commonly grey, purplish-brown or white. They are easily rubbed off by fingers.

Where there are slight infestations only, control measures are not needed. Heavy infestations may be removed by mowing. Pesticides are not normally recommended, but applications of sulphate of iron would probably limit the spread of slime moulds.

There are many rust diseases of turf grasses. Susceptible species to this are perennial ryegrass and POA pratensis. This can occur all year round but most common from early summer to late autumn, during mild humid weather, low fertility and infrequent mowing regime. The affected turf appears rust-coloured, due to the production of numerous yellow or orange spores on the leaf. Spores adhere to fingers when rubbed.

Conditions that favour rusts are warm, humid summers. Most often seen in long grasses. Regular mowing will help to discourage rust attack. Ensure adequate fertility in particular with regard to nitrogen.



Rust



Take All

Occurs mid spring or early autumn in sterile soil conditions, such as poorly-drained or fumigated soil, and in new sand greens. Severe outbreaks have been associated with high surface alkalinity, especially after liming. The main symptoms appear commonly in spring. Leaf margin turns reddish or yellowish, changing to brown as it dies. Dead turf remains erect. Disease scars heal slowly, and centres of affected areas are often invaded by weeds.

Sand constructions are particularly vulnerable. Avoid alkaline reaction fertilisers and do not apply lime. Also check your irrigation water for high pH. Apply fertilisers which contain ammonium sulphate to acidify the turf surface. Light applications of sulphate of iron may also be made at 3-4 week intervals. Heritage fungicide is the only product that is approved for use against Take All Patch. Maintain good turf vigour by supplying adequate nutrition. Ensure the turf is free draining by regular spiking. Remember, take-all patch spreads rapidly in wet, water retentive turf.

All turfed areas are susceptible to excessive thatch and can occur throughout the year, but is most rapid from October to December. Excessive thatching can be induced by compaction, over feeding and over watering. Circular patches up to 500mm in diameter where the surface of the green sinks due to decomposition of the thatch layer. Sometimes turf in the affected areas undergoes a colour change to a darker green or yellow. The affected thatch may also change colour, to orange, whitish or black. White mycelium may also be visible in thatch.

Physical causes of thatching may be alleviated by additional aeration and thatch removal on the areas worst affected. Regular applications of wetting agents, such as H2Pro or can help to avoid infection. Maximise penetrating wetting agent can help to alleviate the problem.



Thatch



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Yellow Tuft

All turf species are susceptible, occurring during spring and summer when the plant is actively growing combined with poorly-drained soils and over-watering. Individual plants form into a dense tuft or yellow leaves, resulting in a bumpy surface during spring and autumn. To control yellow tuft, improve surface drainage, reduce irrigation, apply wetting agents, increase aeration, apply a little NK fertiliser such as Greenmaster Invigorator. Yellow tufts can be removed by mowing.



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