

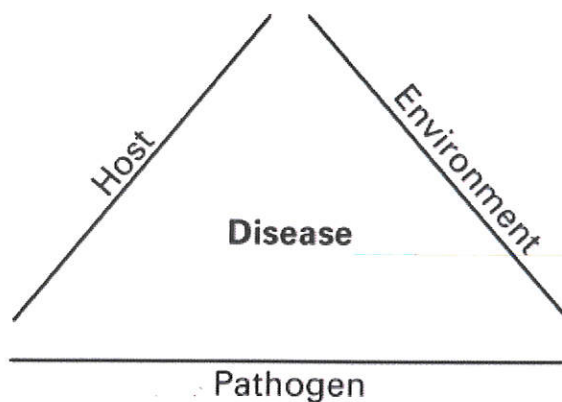


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Maintenance Update

Integrated disease management

Integrated disease management involves a range of measures we take to prevent fungal disease outbreak caused by an interaction between the pathogen (disease causing micro-organism), the host (plant species) and the environment. First and foremost, we must prepare the rootzone to become conducive to growing our desired species of fine grass by reducing thatch content. The pathogen is invariably always present in the soil, usually surviving in the thatch layer, hence the reason we strive to keep thatch under control.



Working in the links environment there is no doubt we are fortunate in the sense that we have good air circulation, minimal shade and a higher proportion of fine grass which is less susceptible to disease outbreak such as fusarium. However, there are times such as last month when the wind drops, soil temperatures rise, plant leaf wetness is pro-longed and increased relative humidity results in outbreaks of fusarium.



Simple daily measures are undertaken to ensure we minimise the risk of outbreak as much as is possible. For example, some members may have seen greenstaff on the greens removing the morning dew from the surface. This practice is carried out as most fungal diseases require the availability of free water in which to spread. By removing the moisture from the green (host) we reduce the risk of disease outbreak (pathogen). There is only so much we can do however, as we encounter a pro-longed period of wet and/or mild weather (environment) this then tilts the balance back in favour of the pathogen. Our long-term strategy is to produce a more sustainable turfgrass sward which is less at risk to these harmful micro-organisms resulting in less disease

outbreak and more consistent putting conditions.



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As a GEO certified links we must take a holistic approach to managing disease outbreaks - prevention is better than cure. Cultural methods include regular over-seeding with more disease resistant cultivars, top-dressing to dilute thatch, the physical removal of excessive organic matter and regular aeration practices which create more air space. These cultural methods are the very basics of greenkeeping and have been around for many years, in many different shapes and forms - we plan our entire maintenance schedule around this tried and tested concept.

By converting to a more sustainable fine perennial grass sward of bent and fescues, which are far less susceptible to fungal disease outbreak, we swing the balance in our favour. We currently have a high percentage of poa which we aim to replace with the perennial plants such as bent and fescue. By committing to this species exchange program, we aim to produce a more sustainable sward, which thrives on dry, firm rootzones which harbour less disease thus producing the finest putting conditions in golf.

Reaching for the fungicide bottle is the very last line of defence and we will only apply this strategy if disease is seen to break acceptable thresholds.

Darren McLaughlan, Course Manager