Reduced Fungicide Strategy

With the ongoing withdrawal of curative fungicides and user reports of limited control with some of the new preventative technologies, what does the future look like for the management of turf diseases?

At AGS we believe that by good cultural work, optimising nutritional inputs and maximising the benefits of soil microbiology and increasing soil health we can radically reduce the requirements for fungicide use.

Clipping Yield & Nitrogen Inputs
By using a nitrogen fertility regime that is designed to only produce enough growth to maintain surface smoothness and no more, we can reduce unnecessary yield that slows green speed and increases thatch build up and disease incidence. Consider measuring clippings to improve accuracy of your nitrogen inputs and ensure you only fertilise when the plant needs it.

Once you know your nitrogen inputs you can use MLSN guidelines to measure other nutritional inputs. Careful measurement of your nutrition programme will not only save money, but will also maximise plant health and reduce reliance on chemical intervention.

MLSN
All our soil samples now offer MLSN values as well as traditional guidelines for your soil. MLSN stands for Minimum Levels of Sustainable Nutrition. These are new guidelines that have been developed to be turf-specific. Traditional guidelines are based on agricultural templates for the production of wheat, barley, hay, pasture, etc and research suggests these over-estimate what turfgrass actually needs to perform healthily.

The old guidelines were a target to try and hit between a low and high threshold. The MLSN principle is that if you stay above the MLSN level for each element, then the grass plant will not be deficient in that particular nutrient, and applying more of that nutrient will have limited or no effect. MLSN is not a target – just keeping soil levels above the guidelines is sufficient. Please see www.asianturfgrass.com and www.paceturf.org for more information as these are the organisations who developed them and information there is completely independent.

Soil Health
Is your soil working for you? The soil is a massive resource which can be tapped into by all turf managers. By nurturing and promoting a balanced soil microbiological system we can further reduce plant stress and disease. Carbon is the key to feeding beneficial soil microbes. Make sure your 'organic' fertilisers actually have a high carbon input and have been aerobically composted to ensure they offer the greatest boost to microbial populations possible. A high carbon content soil will assist the breakdown of nutrients into a plant-available form and reduce stress. Use very high quality products such as Sustane organic fertiliser and Essential Plus liquid biostimulant to maintain these high carbon, high microbe soils. High microbial activity will break down thatch and convert the material into humus that will increase C.E.C, improve water regulation and provide a better soil structure.

Microbial Inoculants
Companion is a strain of Bacillus subtilis (GB03) that is classified as a PGPR (Plant Growth Promoting Rhizobacteria). This has well researched plant health benefits that increase root growth and fight off pathogens to reduce plant disease susceptibility. Like all soil microbes Bacillus subtilis feed on carbon compounds, so to maximise the effect of Companion ensure you combine it with carbon-based fertilisers and biostimulants in your programmes.

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Phosphite
Growth Products TKO Phosphite is well-researched and performs extremely well in independent testing compared to other phosphite products. Incorporating this into your programme alongside more traditional methods such as chelated irons to reduce leaf and surface pH, dew control, shade removal, air movement and a good aeration programme are vital pieces in the turf disease management jigsaw.

Overseeding Strategy
Look at your overseeding programme. Are you getting good long term results from your seed? It may be prudent to reduce nitrogen inputs at renovation time to allow Bents and Fescues enough space in the sward to germinate and establish if you can withstand the increased recovery period.

Is the sward in a condition to grow the new species? There is little point in sowing Fescue in a poorly draining, thatch surface. It has very little chance of long term survival. Drainage and thatch reduction must come first.

When overseeding look at using either granular or liquid mycorrhizal treatments to favour the growth of perennial grasses to out-compete annuals. By reducing quick release nitrogen and adding mycorrhizae, species like Bent, Fescue and Ryegrass stand a much better chance of producing a deep-rooted healthy sward that keeps Poa annua out.

Use of Fungicides
Turf managers will no longer have the ability to use effective curative fungicides following the withdrawal of iprodione, so understanding which active ingredient to use and when best to apply, will be key to a cost-effective strategy. First use of some of the new SDHI chemistries has not been successful and understanding how these products work is more important than ever. Use the guide on page 54 when dealing with microdochium and always consult your AGS representative if in doubt, who will be able to offer practical help on the correct choice of active ingredient and any beneficial tank mixes that will help keep your turf healthy.

AGS Principles
AGS can help with full agronomic support to not only supply the right products at the right time of year, but also ensure you are not over-applying products in a manner that will cause more issues than it solves. A balanced approach using well-researched methods alongside a solid cultural programme will reap the greatest rewards.

Committees and management must understand that chemical legislation is changing and the golfing and wider sporting public must adapt and accept that turf managers are professionals who know best how to manage turf in the long term and that quick fixes are never a long term solution.