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The science behind the innovation

Bayer's most recent innovation in turf fungicide; Interface[®], prides itself on its unique StressGard[™] Formulation Technology. It is this complex combination of ingredients that makes it one of the most effective turf fungicides available, however there is confusion amongst greenkeepers as to how this actually works. Bayer's Technical Manager, Dr. Colin Mumford, explains the science behind this latest weapon against turf disease and reveals the secret behind StressGard[™] Formulation Technology.

"We are often asked how StressGard[™] Formulation Technology works and how the formulation makes Interface[®] different to other products," says Colin. "The key to this new fungicide is the unique formulation of ingredients within it."

He explains that every turf fungicide is a combination of active ingredients, co-formulants and carriers, and precisely how they're formulated will determine how well they specifically perform on turf. "Without the right formulation, even the best active ingredients can be wasted. Just like in golf, you could give the same ball and the same club to two different players and they would achieve different results. Optimising their performance is key to success."

Active ingredients fight turf disease; Interface[®] contains a combination of iprodione and trifloxystrobin and is proven to deliver excellent disease control against six key turf diseases. However it's the inclusion of turf specific co-formulants that really makes StressGard[™] Formulation Technology and helps the product perform in unique turf stress conditions. They also help keep the formulation stable in the bottle and on the leaf. In Interface[®] these co-formulants have been refined to overcome classic turf fungicide problems.

Colin explains that, for example, Greenkeepers will often mix two or more pesticides in the same spray tank. "While this is accepted practice, there are significant risks involved if incompatible products are used. Sometimes the two products can 'congeal', resulting in blocked sprayers and nozzles causing unnecessary maintenance," he adds that in other situations, the two chemicals will just separate in the tank. "This could mean that the first nine greens will be sprayed with one chemical at double dose, and the second nine greens will be sprayed with the other at double dose. Unless a product label recommends the tank mix it is done so at the operator's own risk and if something goes wrong there will be no back up from the manufacturer," says Colin.



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The unique make up of Interface® and its two modes of actions make it a convenient one product solution for use in any season. The introduction of StressGard™ Formulation Technology's turf specific co-formulants, stabilises the mix and ensures an even and effective spray.

StressGard™ Formulation Technology continues to improve the efficacy of Interface® once it hits the leaf.

"Standard non-optimised formulated liquids will often bounce or roll off the surface," explains Colin. "Essentially, that is the greenkeeper's fungicide investment literally running away into the soil." StressGard™ Formulation Technology ensures that the droplets hit the leaf and stick to it. In addition, this means the area of contact is much larger than in a non-optimised formulated product, ensuring that absorption of the product is maximised."

"Imagine what would happen if you place a fully inflated football on the table, with even the slightest slope" says Colin. "It would roll off. Now imagine a largely deflated football placed on the same spot; the added area of contact created by the 'squashed' ball allows it to stay in place. Interface's droplets work in much the same way." Because the active ingredients are formulated to work to their optimum in this scenario, the plant suffers less disease stress, leading to visibly healthier turf with an improved appearance.

The UK's tendency to suffer prolonged wet weather has provided an ideal testing ground for Interface® fungicide's capabilities. The damp, humid conditions suffered throughout the year, present a continuous challenge for greenkeepers who require a robust fungicide solution for most eventualities.

Prior to the Interface® launch numerous greenkeepers across the UK trialled the product. Colin Robinson, Course Manager at Kings Lynn Golf Club, put the product through its paces last autumn and found it to work exceptionally well.

"We had a real problem with disease at our club, we have to deal with a lot of shade from trees and at ground level we have practically zero air flow, so the turf does stay very wet. We trialled Interface® and we've been very pleased with it. What we really noticed was the health of the turf after application – it really greened up and the grass looked healthier. In actual fact I used it on the two worse greens we've got to give it a good trial and we've been exceptionally pleased with it."



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“StressGard™ Formulation Technology might look like a bit of a buzz word,” says Colin, “but we’re really keen to show turf managers that there is real, effective science behind it. It is also proving to not only help protect against turf disease, but according to the STRI: “plots treated with Interface® also had the best turf quality and were healthier looking compared to other turf fungicides tested.”

A number of videos are available on YouTube visually showcasing exactly how StressGard™ Formulation Technology works, they can be found by simply typing StressGard™ Formulation Technology into YouTube’s search bar.

