

NEWSLETTER #5 MAY 2019 "BUGS EXPLAINED"

Hello everyone, this is my 5th newsletter update and in this edition I would like to provide you with some information to help you the golfing members understand the reasons and eventual aims and ideal outcomes behind our change in approach to the management of the putting surfaces.

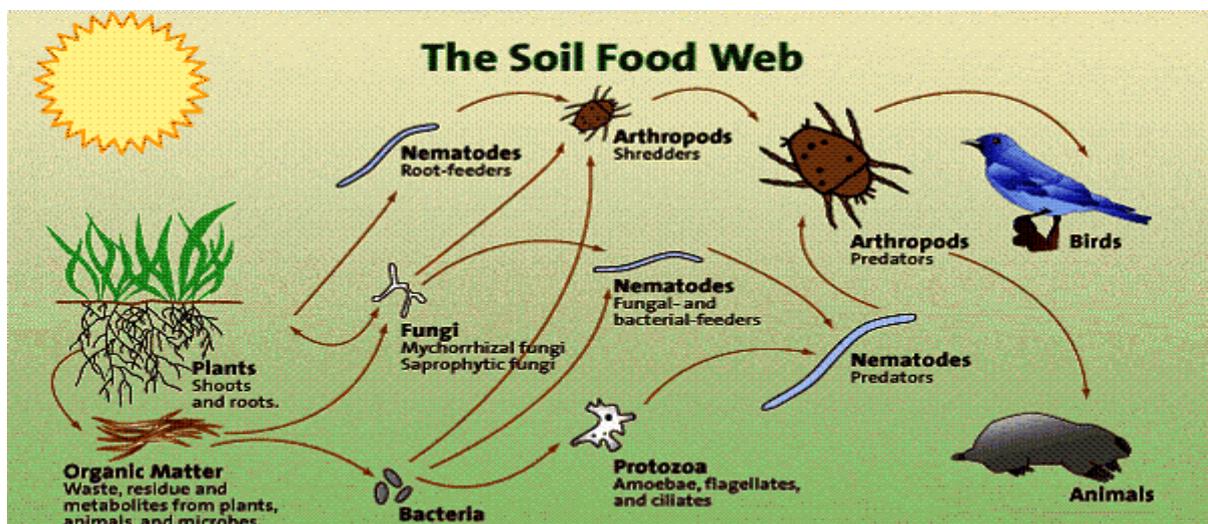
Bugs – The Battlefield under your feet.

Over the past 30-40 years the Greenkeeping industry has followed a common basic blueprint to create and uphold putting green surfaces. This common management process broadly includes providing the grass plant with monthly nutritional treatments, watering, regular close mowing, surface aeration and application of chemical treatment to combat the inevitable fungal disease outbreaks.

This annual cycle of heavy saline fertilisation, heavy watering, regular mowing and chemical treatments over such a long time period have a negative effect on the soil condition.

Another issue is an increasing thatch layer created by the accumulation of grass clipping debris from frequent mowing that forms layering just below the green surface, these negative maintenance by-products all contribute toward a poor growing environment that supports the establishment of annual meadow grass (a non-desirable weed grass species) and also creates a sword that is very susceptible to fungal turf diseases.

It is now commonly understood that one very important element in the growing of healthy plants has long been overlooked, and that is the health of the soil. Healthy soil has its own balanced population of microscopic bacteria and fungi that clean the soil by feeding on and decomposing thatch layer. Beneficial microbes also attack and kill bad bacteria microbes in an ongoing microscopic battle within the soil. I like to think of these beneficial microbes as nature's bin men whose job is to clean up and recycle the rubbish. The population of beneficial microbes needs to out-number the non-beneficial to help suppress the effects of bad bacteria that can cause fairy rings and turf disease.



As I have mentioned in previous newsletters many of the most effective chemical treatments for fungal turf diseases have been withdrawn from production due to the risks to health. The chemical withdrawal has prompted a big re-think in how quality playing surfaces can be achieved in a cleaner more cost effective sustainable manner.

The style of management I described is an unfortunate culture that the Greenkeeping industry has adopted due to the pressures of all year round play and the desire for very receptive dark green putting surfaces, these maintenance practices and the ingredients within synthetic high saline fertilisers contribute towards creating poor anaerobic soil conditions (soil with no oxygen).

The withdrawal of fungicide chemicals means that many current maintenance regimes which often contributed to disease susceptibility in the turf have now effectively had the fungicide safety net removed.

The residual effects of high saline fertilisers, and especially fungicide chemicals that kill all bacteria, whether beneficial or non-beneficial to the grass plant have a huge effect on the microbial bacteria population within the soil, the result can be a very compacted, sour, lifeless soil that has had much of its natural support system depleted. Not an ideal environment for growing healthy perennial grass.

The impending withdrawal of fungicide chemicals means that the old style maintenance regime has to be adjusted. The self-perpetuating cycle and negative effects of the current maintenance culture needs to be broken with more focus on creating healthy soil.

Boosting the population of good bacteria should go along- way towards creating healthier soil and thus a better platform to produce the more desirable grass plant species that are far less susceptible to attacks of turf disease as we move into a chemical free future.

Reducing our thatch layer and re-introducing beneficial bugs

We have teamed up with a company called Symbio who have been around for the past 29 years. Their main aim is to organically boost the naturally occurring beneficial bacteria found in healthy soil by using organic naturally occurring ingredients within the make-up of their treatments and fertilisers. This ensures that the bad bacteria which causes turf diseases and poor growing conditions are always in the minority within the soil. It is basically allowing nature to do its own thing but helps by giving the good guys a leg up!

Back in March we applied a product called Thatch Eater to our greens via 40mm solid tine holes and 20mm sarrel roller holes. SYMBIO THATCH EATER is a cocktail of beneficial soil fungi and bacteria specially selected for their ability to rapidly degrade thatch and organic matter and to release locked-up nutrients for plant growth

We are currently in a transitional period within the process. If things go well and our thatch levels are reduced next year we will look into moving to the next phase of monthly treatments called Symbio Compost Tee. This is a complex brew of many different types of bacteria designed to create a platform for growing perennial grass species.

Soil profiles showing lifeless soil (left), and a healthy biologically active soil (right).



We are 3 months into the 12 month process of thatch reduction. The cooler springtime we have experienced has had a slowing effect on kick-starting the new treatments that do require temperatures of 5°C to trigger their effectiveness.

We have taken the decision to also use Symbio for this year's greens nutrition programme in an effort to compliment rather than compromise the effect of the thatch eater. By taking this step we ensure we are avoiding applying a detrimental product such as a high saline fertiliser from another company.

I cannot stress enough that the sports turf industry is going through a very difficult period over the last few years. The withdrawal of chemicals and changing weather conditions has positioned many people within the industry well out of their knowledge based comfort zone. With each season that passes more knowledge regarding new practices and the new products that we use is being gained by myself and my staff and every effort is made to ensure the putting surfaces are as good as we can achieve.

While creating the best surfaces we can achieve is always our aim I will not allow the management of the greens to slip back to old methods in search of a quick fix. The clear aim is to achieve a cleaner healthy soil to then provide a platform for growing more desirable perennial grass species. This in turn will lead the club to producing better quality putting surfaces that have a greater tolerance to turf disease.

I am personally fascinated and very enthused by soil biology and believe it is genuinely the correct path to follow in search of quality playing surfaces, at the end of the day Mother Nature knows best.

Thanks, Rob Wills

Course Manager.

Visit www.symbio.co.uk for more info on soil biology.

