

Preparing your winter offensive

AS WINTER approaches, compaction can be a major problem, particularly in rootzones that have a high 'fines' content (clay/silt/organic matter).

Constant foot and equipment traffic over the summer months will have taken its toll in compacting the soil and pulverizing the fine soil particles to create a thin layer than can become a barrier for the transport of air and moisture into and through the soil profile. These 'fines' can clog-up the micropores and fill-in the collapsed macropores with solids that force out oxygen and prevent the gravitational drainage of water. In such instances, compaction can reduce the operating efficiency of turf by as much as 25-30% as water does not drain, air movement is stopped and root growth is restricted.

In addition, compaction can cause excessive run off and reduced irrigation effectiveness. Regular aeration will of course help to alleviate these problems but at any one time using mechanical means, less than 10% of the surface will actually be affected.

A complementary treatment however, following mechanical aeration (hollow coring/verticutting), is the introduction of Integrate Plus granules that contains advanced polymeric polyelectrolytes, together with a superior soil penetrant system. Integrate's negatively charged polyelectrolyte (anionic) granules attract the positively charged (cationic) clay and organic soil particles and aggregate the minute de-structured clay particles ('fines') forming them into larger crumbs. The formation of these crumbs opens up air spaces, allowing the free flow of oxygen and water and create spaces for root development.

Deciding on which fungicide to defend your territory is key to ensuring a successful outcome. For the late autumn and winter the requirement is to identify the ones that contain 'actives' which work well under cool and cold conditions and, where possible, provide added physiological benefits.

Particularly effective under cool, cold conditions is the broad spectrum turf fungicide Eland and applications now will provide disease protection for up to 50 days.

This long term protection is achieved through the spray deposit being held on the leaf long enough to penetrate and be held within the leaf tissue, which serves as a fungicide reservoir constantly releasing its active ingredient, pyraclostrobin, to provide long term protection.

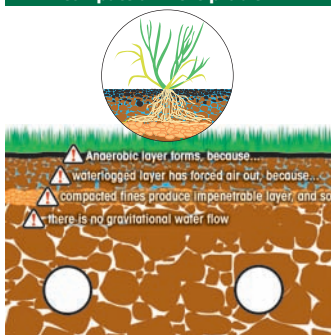
Eland is specially suited to being applied as a preventative treatment, especially when disease pressure is high. It is very effective against all stages of the fungus within minutes of being applied and can restrain mycelial growth to provide additional curative activity.

In addition to its proven abilities as a turf fungicide, recent research has shown Eland to have a number of additional physiological benefits. Such benefits include improving plant

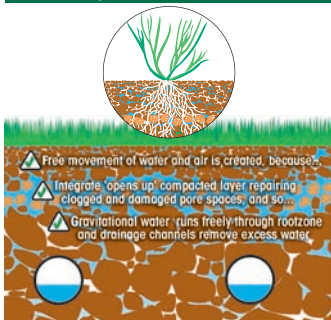
frequently identified causes, however inadequate drainage, poor construction materials, algae and the use of inorganic iron/sulphur have all been implicated in its formation. When oxygen is in short supply within the rootzone, the potentially toxic gases Hydrogen Sulphide and Methane can become prevalent within the rootzone pore spaces, resulting in root damage. Blockade-LX contains activated carbon that absorbs these gases so reducing the damaging effect they can cause. In addition, a rooting stimulant is incorporated in the formulation to assist the plant roots to re-colonise infected areas and works well in combination with mechanical aeration, such as spiking or hollow tining.

Natural soil iron, though plentiful in the soil, can be deficient as it is mostly present as an insoluble form, which the plant is unable to take up. In addition, the continued use of iron

Compaction... the problem



Compaction... the solution



Eland disease control



Black layer

health in the form of stress management under cold conditions and during aeration. This has the effect of helping the plant and root system to endure a stressful event and overcome stress through root system retention. In addition to combating fusarium attack, a major benefit during winter months is that applications of pyraclostrobin allows a plant to recover more quickly from root damage caused by aeration or surface foliar damage caused by ball mark injury.

Black layer is a problem that can arise during the winter months, particularly common under wet conditions.

Poor water movement and water-logging are probably the most

products based on ferrous sulphate can also lead to problems, including black layer, turf blackening and reduced root growth.

Magnet contains iron chelates and together with a new penetrant system, enables rapid transport of the iron through the foliage and uptake via the roots. As a result, a colour improvement can be observed within a space of just 12 hours following application.

For a number of years, the liquid formulation Magnet Rapide has been the first choice liquid iron for many turf managers but applying the product on wet, soft greens in the winter was often a problem. With the introduction of Magnet Dynamic granules, this has changed.

Magnet Dynamic is structured around a fertilizer min-granules with an analysis of 3.0.14 that will not only provide excellent greening but will also harden the turf to assist the plants ability to withstand disease pressure. A major benefit is that as the iron is in chelate form and is released in a controlled, sustainable manner that can last for up to 16 weeks, depending on mowing regimes, etc.

Applied at any time of the year, Magnet Dynamic is an ideal management tool to introduce into

the winter programme. The potassium in the formulation helps strengthen cell turgidity and the low N content, together with its integrated micro-nutrient package helps improves turf health without overstimulation or unwelcome flushes of growth.

Operation review

Winter can be a testing time for the turf manager as in recent years no two seasons have been the same.

Preparedness is the key to a successful outcome and ensures the

turf remains healthy and able to contend with the stresses brought about by changing climatic and growing conditions.

Pre-planning and control are essential requirements and there may be opportunities to integrate some of the aforementioned products into the winter programme which will enable the plant to resist or repel all that is thrown at it and be in an ideal state to advance into the spring and take up a healthy position.

www.rigbytaylor.com

