

# StressBusters

Richard Fry of Rigby Taylor looks at some important options to protect the turf during the late autumn and winter.

**THE** clocks have gone back, a chill is in the air and winter approaches. Pests, diseases and weeds are all hibernating and we can put the sprayer away, relax and let nature take its course.....wrong!

The main spraying season may be over but there could still be lurking some nasty surprises unless we are vigilant.

Autumn is a time when turf diseases can strike unexpectedly, particularly during a mild period when the grass is damp. Under these conditions, prevention is better than a cure and fungicide applications will provide that safety net against the unexpected.

Concerns in the past have been expressed about applying nitrogen-containing fertilizer in the autumn/winter as this may increase the likelihood of fungal attack. Research has shown however that these concerns only apply when inappropriate product selection has been used. The past few mild winters have seen growth continuing and it is important to ensure there is enough nutrient availability to sustain this growth.

The direct application of supplemental amino acids during the winter via such products as Amino Form R during stress periods allows considerable savings in energy to be made which can then be channelled into essential physiological processes such as photosynthesis and protein formation resulting in new growth. The result is a healthy, more vigorous turf more able to withstand the rigours of stress.

The choice of fungicides is quite varied but a key selection requirement is to identify that they contain 'actives' that work well under cool and cold conditions and also provide additional 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 the leaf tissue and 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. These benefits include improving plant health in the form of stress management under cold conditions and during aeration. Further, research has shown turf treated with pyraclostrobin has increased root length and density by 'priming' the immune system of the plant before an event. This helps the plant and root system to endure a stressful event and overcome the stress through root system retention. In addition to combating fusarium attack, it should be noted that Anthracnose is on the increase, it is a disease that only attacks weakened turf so a plant's ability to recover more quickly from root damage caused by aeration or surface damage caused by ball mark injury is a major benefit during the winter.

Black layer is another problem that can arise during the winter months, particularly common under wet conditions. Poor water movement and water-logging are probably the most frequently identified cause,

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. Blockade-LX can be applied at any time of the year and works well in combination with mechanical aeration, such as spiking or hollow tining.

Drainage is also an important factor to consider over the winter months, particularly in rootzones that have a high 'fines' content (clay/silt/organic matter) that compact easily, drain badly and have poor aeration. Integrate liquid or, its granular formulation, can reduce compaction by repairing and restoring damaged pore space, improve rootzone drainage and encourage root growth.

Another important aspect to consider during the winter months is to fortify turf colour and iron deficiency over an extended period of up to 16 weeks. Applications of the new Magnet Dynamic granules enhance turf colour within 12 hours of treatment and the potassium helps strengthen cell turgidity, combined with granular iron to enhance plant disease resistance.

Nothing can be done about the onset of winter apart from helping the turf to keep healthy and contend with the stresses brought about by changing climatic and growing conditions.



**Black Layer before treatment with Blockade-LX**



**Black Layer 7 days after treatment, plus aeration**



**Black Layer 21 days after treatment, plus aeration**