



agrovista  
amenity

# Autumn/ winter prime package



# Autumn/winter prime package

A highly advanced approach to disease management without fungicides, exclusive to Agrovista Amenity.

We all know that keeping disease at bay throughout the winter isn't getting any easier... take some of the pressure off, PRIME your turf now!

- Reduce the likelihood of disease attacks throughout the Autumn and Winter
- Improve turf quality and colour
- Reduce reliance on fungicides
- Improve turf density and wear tolerance
- Give turf the best chance of going into spring clean and healthy, ready for play!



## Bullet Chelated Iron

10l/ha

Whilst other products often describe themselves as chelated, Bullet Chelated Iron is a 100% chelated iron.

Furthermore, it is formulated from 100% carboxylic acid using our in-house technology. The chelated formula prevents 'lock-up' with other elements in soils and significantly reduces the incidence of iron oxidization which can lead to soil panning.

### Key features:

- Protects Cell Walls: pH-neutral formula avoids calcium loss and maintains cell wall strength
- Boosts Defence: Shields cells and microbes from UV, pests, and disease
- Soil Friendly: Low sulphate and gentle pH support beneficial soil microbes
- Fast Results: Rapid uptake delivers quick, visible turf greening



## Citric Acid

3l/ha

Citric Acid will reduce the pH of the leaf surface which in turn limits fungal spore germination, making it useful in supporting the plant in high disease pressure conditions. These fungicidal properties can be attributed to a number of factors:

### Disruption of Fungal Cell Membranes

The acidic nature of citric acid can disrupt the cell membranes of various fungi. This can result in the leakage of cellular components and eventually lead to the death of the fungal cells.

### pH Changes

As a weak organic acid, citric acid lowers the environmental pH. Many fungal species have a preferred pH range for growth and reproduction. Lowering the pH can inhibit fungal growth or even kill the fungus.

### Sporulation Inhibition

Citric acid can inhibit the process of sporulation, which is the production of spores in fungi. Spores are a critical part of the fungal lifecycle and are often responsible for disease spread.

By inhibiting sporulation, citric acid can prevent the spread of the fungal disease.

### Metabolic Disruption

Citric acid is a key component in the citric acid cycle (also known as Krebs cycle or TCA cycle), a metabolic pathway used by all aerobic organisms to release stored energy. In certain concentrations, citric acid can interfere with this process in fungi, disrupting their metabolism and growth.



## Movax™

1l/ha

Contains patented Plant Impact technology named Alethea™ that helps grass cope with abiotic stress (such as cold conditions) by increasing antioxidant production together with a nutrient package. Alethea™ is a novel combination of plant signalling analogues that can cause plants to increase antioxidant production. More antioxidant activity combats ROS (Reactive Oxygen Species), and in doing so helps grass to mitigate the effects of abiotic stress, such as heat, cold, salinity, UV and drought. Alethea neutralises the build-up of harmful Reactive Oxygen Species (ROS) by stimulating the plant's production of antioxidants.

### Key features:

- Optimised novel combination of plant signalling analogues
- L-Arginine amino acid
- Innovative and patented Alethea™ technology



# Plant cells

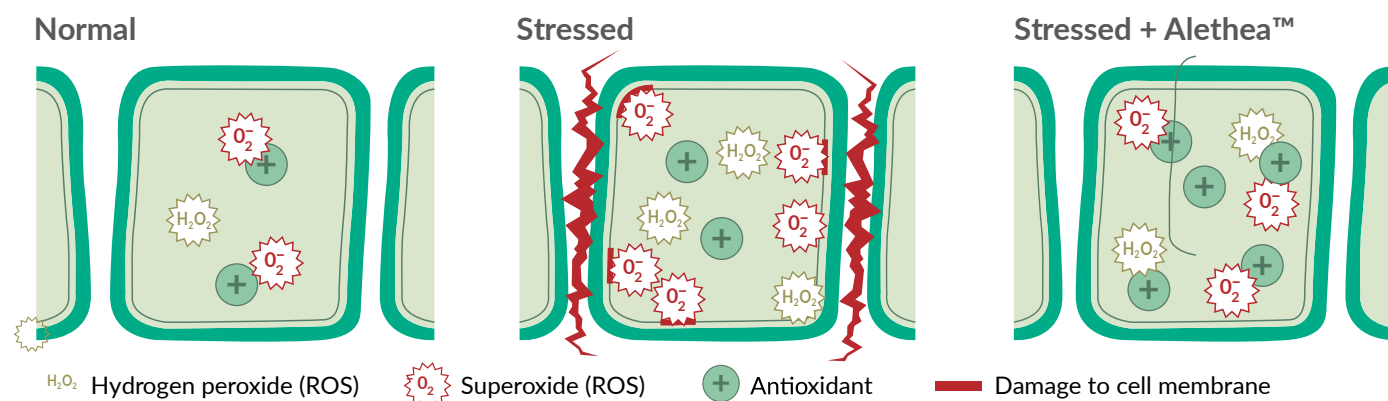


Figure 1: The role of Alethea in Movax™



## Cal-Mag 7.0.3

10l/ha

Cal-Mag is an effective Autumn/Winter turf hardener, strengthening cell walls thus further reducing the likelihood of a damaging disease attack (figure 3). It contains a small amount nitrate N, directly available to the plant, to further boost plant health and assist effective uptake of the PRIME package.

### Key features:

- Sulphur-free hardener for use all year round
- Magnesium provides colour without any growth flush
- Improves cell turgidity and stress tolerance
- Enhance disease suppression

**Calcium is responsible for plant cell division and for strengthening cell walls within the plant...**

## Benefits of Alethea technology

- Increased antioxidant production
- Improved resilience against abiotic stress
- Broad range of compatibility
- Novel combination of plant signalling analogues

## What is an analogue?

A compound that has a similar structure and chemical properties to those of another but differs by a single element or group.

## Why use analogues?

Because analogues only differ by a single compound or group they can sometimes be beneficial by providing the positive response sought without unwanted side effects.

Using synthetic compounds to create analogues of a natural compound or using natural analogues can create benefits such as a more consistent or controlled reaction when applied.

The analogues in Alethea combat plant stress and also assist with the uptake, transportation and storage of nutrients within the plant.

## Calcium

### The role of calcium in crop production

Ca & Mg activates a number of plant growth regulating enzyme systems. These enzymes are involved in numerous processes within the plant's cells that contribute to its overall health and growth.

Mg is involved in protein synthesis, which is crucial for plant growth and resilience to environmental stress.

Magnesium plays an important role in the metabolism of carbohydrates in plants, which can affect the overall vigor and growth rate of the grass.

Calcium is responsible for plant cell division and for strengthening cell walls within the plant, by strengthening cell walls, it helps grasses maintain turgor and rigidity when withstanding various forms of stress, including: heat, drought, and disease.



Ca aids in the process of nutrient uptake by helping to regulate the opening and closing of stomata. Proper stomatal function helps in nutrient and water absorption.





# TKO Phosphite

8l/ha

Phosphite is well documented at reducing the incidence of microdochium patch in managed amenity turf.

TKO Phosphite is THE most concentrated phosphite on the market, supplying 0.82kg of phosphite per litre. It is vital to use phosphites in a programmed approach, at label rates. TKO Phosphite is one of the best non-fungicidal disease prevention tools available to turf managers

## Key features:

- At 8ltrs/ha delivers 6.6kgs of phosphite
- Rapidly absorbed via leaf or roots
- Strengthens plants immune system
- Ideal partner for preventative fungicide
- Phosphite is proven in independent UK based trials to: 'Significantly reduce incidence of Microdochium nivale when used in programme of applications

## Application

### Apply to tank in this order:

1. pH reducer 3L/ha
2. 10l/ha Bullet Chelate
3. 8L/ha of TKO Phosphite
4. 1l/ha Movax
5. 10l/ha Cal-Mag in 200-300L/ha of water\*

Apply monthly throughout late summer, autumn/winter and at any other time when disease pressure is high.

Particularly effective when applied close to disease pressure periods.

\* For this rate or bi-monthly at half rate, for best results.



Stop mycelial growth in its tracks



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Don't let disease take hold. TKO Phosphite, proven to reduce the incidence of Microdochium Patch.

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