Monthly Focus -

Broad Spectrum Residual Insect Control with

Acelepryn Insecticide

Technology and Performance

As spring looms in the horizon the focus of many turf managers begins to shift to residual insecticides. A warm start to winter and consistent rainfall across the Eastern Seaboard, will no doubt contribute to the unpredictability of the emergence times of many turfgrass pests. The seasonal occurrence of caterpillars (Armyworm, Cutworm, etc.), white grubs (African Black Beetle, Pruinose Scarabs, etc.) requires pre-emptive action in the form of insecticide applications and increased vigilance.

There’s an effective way to control white grubs and other turf-damaging pests while also minimising the impact on the environment. Acelepryn insecticide from Syngenta is in a class of chemistry with a mode of action like no other in the turf market. Studies prove that it delivers excellent results at the lowest application rate ever utilised for white grub control. A single application lets turf managers control a wide variety of other turf insect pests and entire pest complexes. Acelepryn insecticide has a favourable environmental and toxicological profile; Acelepryn has very low toxicity to most non-target animals (such as mammals, birds, fish and bees) and is an unscheduled poison, meaning there are no PPE (Personal Protective Equipment) requirements and no re-entry restrictions.

Unique Chemistry and Mode of Action

Acelepryn is the first turf product featuring an active ingredient from the anthranilic diamide class of chemistry. This class was inspired by research into the insecticidal properties of ryanodine - a natural substance found in the bark of trees and shrubs of the genus Ryania. Chlorantraniliprole the active ingredient in Acelepryn is a synthetic compound that affects the ryanodine receptors in the insect muscle fibre. These receptors regulate the flow of calcium into the cell cytoplasm to control muscle contraction. Acelepryn binds to the ryanodine receptor and causes it to remain open, resulting in a depletion of calcium ions that disrupts muscle contraction. This leads to muscle paralysis and death. The ryanodine receptors in the pests Acelepryn targets are 400 to 3,000 times more sensitive to anthranilic diamides than the receptors in mammals, minimising the impact on non-target species. This is one reason why Acelepryn has an excellent environmental and toxicological profile and an unscheduled poison rating.
Trial plots treated with Acelepryn show no pest damage, whereas adjacent untreated turf exhibits severe damage from Billbug activity.
The majority of turf insecticides belong to a handful of chemical classes. Over time, insects can, and have, become less susceptible to these chemical classes. **Acelepryn** represents a class of chemistry that has not previously been used on turf insects. It has minimal impact on beneficial arthropods, making it an excellent choice for Integrated Pest Management (IPM) programs.

**Residual Broad Spectrum Control**

A single, low dose application properly timed will provide 3-4 months protection from a wide variety of key turf pests. Season long (up to six months) protection from the key turf pests can be achieved with an early application at the high dose. With the high dose also providing early instar curative control, **Acelepryn** will give sports and open space turf management professionals’ consistent performance and flexible application timing.

**Environmental and User Safety Profile**

Reduced toxicity to humans and other non-target animals is a key goal in achieving a reduced environmental footprint. **Acelepryn** is setting new standards in user safety and was granted reduced-risk status by the US EPA for applications to turfgrass, and has been granted an unscheduled poison status in Australia. This has resulted in no label requirements for personal protective equipment during application and no re-entry restrictions after application. All of which means you can use **Acelepryn** with confidence and re-assure your customers.

**Chlorantraniliprol**, the active ingredient in **Acelepryn** has a low impact on most non-target organisms such as mammals, birds, fish and bees. Studies show that **Acelepryn** has low impact on the environment when applied according to label recommendations. The binding of **Acelepryn** within the soil matrix, combined with low water solubility means it is likely to stay where it is applied and not move towards the surface or ground water. These attributes, combined with the lowest application rates of any preventative turf products and its very low toxicity to most non-target animals, leads to a product with a very small environmental impact.

Speak to your Globe Client Manager about using **Acelepryn** on your turf surfaces this season. Be sure to get in early to ensure maximum protection before pest activity kicks off.
Soil Amendments from Globe Growing Solutions

Globe Growing Solutions has an extensive range of soil Amendment options to suit the needs of any turf management or landscape situation. By undertaking soil analysis through Globe Analytical, you can determine with accuracy the amendment requirements during this spring renovation. Get in early with soil testing to ensure time is allowed for planning a comprehensive amendment plan to address any deficiencies that may be present. Globe supply a vast array of dispersible, granular and liquid amendments to meet both organic and nutritional requirements of turfgrass.

<table>
<thead>
<tr>
<th>Product</th>
<th>Analysis</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>UMX</td>
<td>Organic carbon and humic acid.</td>
<td>Available in both Liquid and Granular formulation- an organic amendment that increases nutrient holding capacity of the soil through increasing CEC.</td>
</tr>
<tr>
<td>Renov8</td>
<td>17-2-8 + Kelp + Humus</td>
<td>A homogenous kelp coated prill for use where sustained root development and quick recovery is required. A blend of up front and slow release nitrogen ideal for renovation practices.</td>
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<tr>
<td>Andersons DG Pro Lime</td>
<td>30% Ca</td>
<td>Highly dispersible premium lime amendment which allows surface application without mower pickup or reduced surface performance. Excellent for addressing calcium deficiencies and raising pH.</td>
</tr>
<tr>
<td>Andersons DG Pro Gypsum</td>
<td>21% Ca</td>
<td>Highly dispersible premium gypsum amendment which allows surface application without mower pickup or reduced surface performance. Excellent for addressing calcium deficiencies without impacting on pH.</td>
</tr>
<tr>
<td>Magnical DG</td>
<td>18.5% Ca, 11% Mg</td>
<td>A dispersible, dust free calcium carbonate and magnesium carbonate (dolomite) prill, excellent for amending both calcium and magnesium deficiencies or raising pH.</td>
</tr>
<tr>
<td>Granular Lime, Gypsum and Dolomite</td>
<td>Various</td>
<td>Available in liquid and various sized granular forms for use in all situations from high cut turf to greens. Lime, gypsum and dolomite for amending deficiencies during renovation.</td>
</tr>
<tr>
<td>Gypsum + Mg</td>
<td>18% Ca +5%Mg</td>
<td>Available in greens and fairways granular size. This product combines Calcium Sulphate (Gypsum) with Magnesium to correct both Calcium &amp; Magnesium deficiencies without affecting soil pH. Ideally for facilities using recycled/reclaimed water.</td>
</tr>
<tr>
<td>Manni-Turf Ca</td>
<td>14% Ca</td>
<td>A highly available liquid calcium ideal for addressing plant deficiencies of calcium.</td>
</tr>
<tr>
<td>Andersons A-TEP</td>
<td>Trace Element Package</td>
<td>A premium granular trace element package ideal for addressing micronutrient deficiencies.</td>
</tr>
<tr>
<td>Manni-Turf Total</td>
<td>Trace Element Package</td>
<td>A specially formulated liquid micronutrient package specifically designed for turfgrass application.</td>
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The Andersons DG Pro Premium Amendments

The Andersons DG Pro Amendment products offer a unique combination of premium calcium amendments paired with DG Dispersion Technology. Traditionally, applications of Lime and Gypsum based amendments have been made during the renovation period when turf surfaces are opened up through mechanical renovation activities. Standard granular Lime and Gypsum products generally have low solubility and are often coarse in granule size making surface maintenance applications difficult without disrupting surface performance and aesthetics.

The Andersons DG Pro Lime and DG Pro Gypsum are premium dispersible greens grade Lime and Gypsum that are ideal for use on fine cut turf situations. When irrigation follows an application, the DG Technology immediately disperses the amendment into solution, delivering nutrient to the soil where it is required.

- Greens grade SGN 100 (1 mm) prill.
- **NEW** Hi Vis formulation for improved visibility during application.
- Contains both 30% Ca and 4% Mg, both essential for soil and plant health.
- Contains Humic Acid Precursor (HAP) for added Humic and Fulvic Acid.
- Improve soil structure through regular applications.
- Increase soil pH.

- Greens grade SGN 100 (1 mm) prill.
- **NEW** Hi Vis formulation for improved visibility during application.
- Contains both 21% Ca and 16% S, both essential for soil and plant health.
- Contains Humic Acid Precursor (HAP) for added Humic and Fulvic Acid.
- Improve soil structure and mitigates the effects of Na without raising pH.
The Andersons Humic DG Dispersive Humic Acid

What is Humic DG?

New from Globe Growing Solutions is Humic DG – a first for the Australian Turf and Landscape market. Humic DG brings new technology to the Australian turf market in the form of a blendable, dispersible and spreadable biological, organic amendment. Unlike other organic amendments currently available, Humic DG contains four vital components to assist in conditioning the soil, stimulating microbial activity and promoting plant health and stress resistance. These four unique components range from very soluble to insoluble in soil media. Working together synergistically, these components provide the soil and the plant with a range of benefits, from highly soluble and plant available Fulvic Acid, to insoluble high nutrient holding capacity of Humin. The four unique components of Humic DG at a glance are:

- **Humic Acid Precursor (HAP)** is the highly soluble portion of Humic DG that quickly releases into the soil upon contact with water. Beneficial soil microbes feed on the HAP particles, transforming it into soluble Fulvic and Humic acids.
- **Fulvic Acids** can be absorbed by root tissue and provide hormone-like stimulation to the plant. It also aids in the efficiency of other plant metabolic reactions.
- **Humic Acids** can be soluble or insoluble and have a high cation exchange capacity (CEC), and helps to chelate micronutrients and stimulate microbes.
- **Humins** are large, high carbon, insoluble molecules that last longest in the soil and have great nutrient and moisture holding abilities.

Humic DG vs. Other Humic Acid Products

Traditionally products containing Humic Acid would be either in the form of a liquid or a non-dispersible granule. Generally speaking, liquid Humic Acid products contain the soluble Humic and Fulvic acids which while they are immediately available for soil and plant activity following application, are prone to leaching due to their solubility. At the other end of the spectrum, granular humic acid products usually contain only the Humin fraction which is entirely insoluble. Humic DG offers turf managers the benefits of these three components together in the one package.

Not only are the benefits of Humic DG associated with the unique contents, but through the use of Andersons DG Technology, turf managers can also experience the improved handling and application characteristics associated with these premium dispersible products. The truly dispersible nature of Humic DG allows surface applications to be made, opening up a new window of opportunity to turf managers in Australia. Turf managers will now be able to apply maintenance rates of a humic acid based organic amendment without impacting on surface performance.
The production process of Humic DG also differs from other granular Humic Acid products resulting in comparatively low moisture content within the Humic DG granule. The end result is a clean, dust free dispersible granule of a uniform spherical size. Available in SGN 100 prill size, Humic DG is suitable for application on all turf surfaces and heights of cut. Low moisture content means that Humic DG granules have excellent structural integrity, allowing for blending and ease of application even in large hoppers with vigorous agitator mechanisms. The dust and grime typically associated with granular Humic Acid products is no longer an issue with Humic DG.

No Mower Pickup  Nutri DG readily disperses into the turf canopy following irrigation, eliminating mower pickup and delivering 100% of applied nutrients to the turf. Mower pickup of conventional granular fertilizers is reported to be as high as 15-25%.

No Particle Movement  Nutri DG disperses quickly when water is applied and moves through the turf canopy into the soil. In a heavy rain or over-irrigation, conventional fertilizers may float and be carried off the intended application area or be deposited in low lying areas where damage may occur.

No Mower Damage or Residual Shells  Nutri DG technology does not rely on a physical coating to release nutrients. Coated fertilizers are very susceptible to mower damage and premature nutrient release.
Globe Analytical at Renovation

Check out Globe’s interactive, online analytical reporting interface
Globe Analytical – at www.globeanalytical.com.au

Ask your local Globe Client Manager about the service and lock in soil testing for this autumn renovation to give the service a go.

**Key Benefits of Globe Analytical**
- Soil, water, tissue and diagnostic reports all stored in one place online
- Comprehensive analysis packages for soil, water and plant tissue
- Free service for Globe customers with absolutely no cost or obligation for use of the website
- Interactive features allowing for comparison, averaging and analysis of results

**Quick Turnaround Times**
Sample processing is streamlined through Globe Analytical’s automated submission system. Globe Analytical uses a local Australian laboratory resulting in quick turnaround times. This ensures you have access to your important results when you need them. Renovation practices and amendment options can be put in place more efficiently giving you healthier turf faster.

**Same Lab and Same Extraction Method**
Using the same laboratory and exactly the same tried and true extraction methods as Globe’s previous soil analysis packages allows for continuity and comparability between old and new soil tests. Using the ammonium acetate as the extraction agent, the Globe Analytical Soil Analysis offers an indication of plant available nutrients – just the same as always.

**Comprehensive Analysis Packages**
Globe Analytical’s soil, water and plant tissue analysis packages are all comprehensive. The soil analysis reports on all major parameters specific to turfgrass management with turfgrass specific guidelines. The water analysis is specifically designed for turfgrass managers and is geared towards identifying issues that may occur from the use of poor quality irrigation water.

**Speak to your local Globe Client Manager for more information about our range or free call**

1800 244 300

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www.globegrowingsolutions.com.au