

A Hand on the Controls

With EU directives clamping down on the amount of chemicals we can use, how can greenkeepers continue to effectively combat pests and diseases? Nia Frost discusses new developments in controls and some highly effective alternative methods.

Over the past 10 years, many control products used regularly on golf courses and other amenity areas have been lost or removed for use by amenity managers. This has happened across the whole amenity area, although pesticides and fungicides have been particularly affected with the loss of, for example, Chlordane, Gamma HCH and Carbaryl. More recently, actives such as Thiabendazol and Diquat for aquatic use have also gone. One thing is for certain, more control products will be lost over the next few years.

WHY ARE PRODUCTS DISAPPEARING?

There are a number of reasons why there are fewer control products available:

- Ai (Active ingredient) not being supported through EU review by manufacturer
- PSD/HSE revoke product for safety, (human, flora or fauna)
- Non support of Data Submission Deadline (efficacy or storage)
- PSD/HSE revoke label (addition or deletion of statements)
- Manufacturer update/change of Ai
- Marketing decide to request label/name change.

THE EU REVIEW

The EU review of control products is probably the single most influential factor affecting the access to control product for turf and amenity managers. The review is officially known as EC Directive 91/414/EEC. Its aim is to ensure that all pesticides on the market before 1991 meet present-day safety standards.

The review has been initiated to:

- harmonise national arrangements for authorisation of PPP within EU
- ensure that all countries operate to a high standard
- be implemented in UK by Plant Protection Product Regulations (PPPR) 1995
- use European data for national registrations.

WHAT DOES THIS LEGISLATION MEAN FOR THE TURF OR AMENITY MANAGER?

Of the 834 actives which are subject to continual review, 50 per cent are not being supported. Although it is fair to say that most of these will affect agriculture and not necessarily amenity. However, there will be a significant proportion affected or lost to amenity and this will have an impact on how you manage your turf in the future.

NEW PRODUCT DEVELOPMENT

But it's not all doom and gloom! There will still be, and are, new control products coming onto the market. These new products have to meet stringent new guidelines laid down by the EU. A positive side to this is that any new products brought onto the market will be the most efficient and safest ever seen in the turf and amenity industry.

But further down the line it may be more difficult to provide new control products that conform to the new legislation, as the cost can be inhibiting. For example, to produce a specific control product just for the turf and amenity industry could cost as much as £200 million. In this situation it would simply not be economically viable to invest in product development. Hopefully in the future it will be possible to work more closely with all areas of the controls industry on a global basis to provide cost effective control products for part of the business.

Research and investment into new control products for the turf and amenity market is still at the forefront of our research programmes, however, we are also looking at all other alternative methods such as 'sustainable' and 'biological' programmes to provide turf and amenity managers with a means to control pests in the future.



Fusarium

WHAT ARE THESE ALTERNATIVE OPTIONS?

Adjuvants can enhance the performance of pesticides by increasing its uptake by, for example, spreading on a waxy surface or by penetrating thick cuticles which results in increased control of difficult species. Another adjuvant benefit is reducing spray drift.

A future development could be using less pesticides and more adjuvant when formulating new products. Scotts is developing a new marker dye which has adopted this principle, with an added benefit of a pH buffer and spray drift reducer.

TANK MIXING

This option of combining actives could be very beneficial if lack of control is given by one product only. The Department for the Environment, Food and Rural Affairs (Defra) is trialling this method to eradicate the invasive aquatic weed water primrose (*Ludwigia grandiflora*) and results have been very positive. Their proposal was to compare the efficacy of a glyphosate-based herbicide and a glyphosate and 2,4-D amine mixture-based herbicide. Their report reads:

"The addition of 2,4-D amine to the mixture is anticipated to enhance translocation rates of glyphosate through the plant, thereby improving long-term control. While glyphosate is excellent for control of many aquatic plant species, the use of glyphosate for eradication on non-native aquatic plants has proved challenging. This approach is novel and will contribute to the management of such species and reduce pesticide use in the environment by improving efficacy of single applications."

According to Defra, the trial has achieved "considerable" success so far. They have reported that:

"The UK is almost free of the invasive aquatic weed water primrose (*Ludwigia grandiflora*), and complete eradication may be feasible."

BIOLOGICALS

Another exciting and potential growth area is the use of biologicals for managing problems in turf and amenity areas. Biologicals have been around for a long time, especially in the horticultural industry. They are currently being used very successfully in some areas of the turf and amenity industry, but scope for their use is potentially much bigger.

The term 'biological' covers a wide range of different products and approaches, from bacterial and fungal products, to soil fauna enhancement products.

Scotts' new biological product ProCrystal is a fast-acting aquatic algicide that controls swimming or floating unicellular and filamentous algae. It improves water clarity and reduces unpleasant odours within days of treatment, without affecting the balance of the environment.



ProCrystal



Grass

MODERN PESTICIDES

The new products that are entering the amenity market are developed to have a label that would ideally consist of the following characteristics:

- a low dose application that minimises the amount of active ingredient released into the environment during application
- covers all modes of action
- a high level of efficacy against a broad spectrum of diseases/pests
- no impact on the environment
- minimal risk to users and non-target species.

A good example of a new product with these characteristics is the turf fungicide Heritage, a unique disease control product from a new class of highly effective, low-use rate, broad-spectrum, environmentally-sound chemistry. The active ingredient, azoxystrobin, is synthetically derived from strobilurins, which are naturally occurring fungicides produced by various species of wood-decaying mushrooms.

CONCLUSION

There is more pressure than ever before on turf and amenity control products, which means that there will be increasing pressure on turf and amenity managers when trying to control pests and diseases.

The EU review process and other legislation will have a big impact on availability of control products for use on turf and other amenity areas. However, there are still high-quality products available now and new products coming onto the market. The impact of new legislation on the turf and amenity sector can be minimised if an integrated approach is used. We are also relying on R&D to provide new products for the future and Scotts is leading the way in this area.

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CHEMICAL ERROR

Question: What is the worst thing that could happen during a heatwave?

Answer: Chemical burns on the golf course.

Please check the wording of container labels thoroughly - accidents can and have happened.

BIGGA suggests coloured caps on containers as a good way of avoiding errors, ie:

- GREEN – Liquid Fertiliser
- BLUE – Wetting Agents
- RED – Total Weedkiller
- BLACK – Selective Weedkiller
- YELLOW – Pesticides
- WHITE – Fungicides... etc.

GI welcomes your thoughts on the subject