

Factors Affecting the Availability of Plant Protection Products in Ireland[®]

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INTRODUCTION

Today's consumers of horticultural products are very aware of issues such as food safety, environmental protection, waste management, health and safety of workers, and so on. Such factors already affect the purchasing decisions of some consumers. Growers must also ensure that the system used to deliver a horticultural product to the marketplace takes into account legislative and best practice requirements while retaining all the quality attributes that the consumer demands. It must also, in the case of a food product, be safe to eat, have no microbiological contaminants, or the presence of residues of plant protection products above permitted MRLs (maximum residue levels). The product must be produced such that no damage was caused to the environment and any waste produced was handled in line with national standards. The workers who grow, harvest, and package the product must be provided with a safe and secure work place that does not endanger their health. It is not easy or cheap to produce quality produce for today's market. The horticultural industry knows what is required to satisfy the market and strives every day to achieve and in many cases exceed these demands.

In this environment, the use of plant protection products (PPPs) is often regarded negatively by those outside the horticulture industry. Most growers, if they had the choice, would prefer not to have to use PPPs, which are expensive to purchase and are time consuming to apply. Spray operators must be properly trained to use them and storing them safely demands investment in facilities. For these reasons the industry trend has been to minimise the need to use PPPs.

Growers now widely implement ICM (integrated crop management) growing practices. ICM systems comprise many husbandry disciplines including integrated pest management. It gives priority to natural, biological, biotechnological, cultural, and plant breeding measures. Pesticides are only used when, without them, reductions in crop yield or quality would result in significant economic loss. Applications of plant protection products are based on known thresholds of economically damaging pests, diseases, and weeds.

As a result, the volume and frequency of PPP use has decreased in recent times. However, commercial horticulture will continue to require some input of PPPs for the foreseeable future. Without the availability of an appropriate range of PPPs certain crops could not be grown commercially in Ireland.

In recent years the range of PPPs available to Irish growers has decreased significantly. Certain key products are no longer available leading to gaps in growers' ability to protect some crops in certain situations. There are two main reasons for the reduction in the number of available PPPs, namely legislative changes and the willingness of chemical companies to register PPPs for horticultural uses in Ireland.

THE IMPACT OF LEGISLATION

Before 1993 each national government in Europe operated its own pesticide registration and authorisation system. Up until 1985 there were few shortages of PPPs for horticultural production. In the period between 1985 and 1993 Ireland progressively operated a much stricter system. Chemical companies applied for approvals and provided the required data. Extra crops could be added to a label if residue data was supplied. During this period fewer new active substances and fewer products were approved.

From 1993 onwards the system changed, with E.U. central authorisation for active substances and member state authorisation for the formulation and specific crop uses (see previous paper "The Effect of European Union Pesticide Legislation in Ireland" by Anne-Marie Dillon). As a direct consequence of the 91/414 EU review of Active Substances since 1993, there has been a marked drop in the number of PPPs available for horticultural use in Ireland. The review process resulted in many PPPs being removed from the market by the E.U. for reasons of operator, environmental, or consumer safety. But many products were also removed from the Irish market by chemical companies. Given the expense of trials to provide data for the review and registration process they had to decide which of their products or active substances to defend, based on projected long-term earnings from each and how much of their budget to allocate to minor crop product registration in Ireland.

Within this major review Irish horticulture has been affected in two main ways. First, many of the PPPs approved for use on horticultural crops were older substances and these are progressively disappearing from the marketplace throughout the E.U. Second, many of the newer PPPs have no approval for horticultural crops in Ireland because the chemical companies did not seek approval. Irish horticulture is a very minor market for most chemical companies, which are not prepared to allocate budgets to product registrations where potential sales are small.

PLUGGING IRELAND'S PPP GAPS

The decreasing availability of key PPPs for many crops is now seriously hindering Irish growers in their efforts to produce top quality products viably. As a result of this developing situation Bord Glas (the horticultural development board, which merged with Bord Bia, the Irish Food Board, in July 2004) in conjunction with Teagasc (Ireland's horticultural research and advisory service) and the horticultural industry recognised the need to become pro active in trying to identify ways to address the shortage of PPPs and to start to plug some of the gaps. In order to address these shortages a network was established including the Pesticide Control Service (PCS), Teagasc, Irish Farmers Association, Animal & Plant Health Association, Horticultural Development Council (in the U.K.), the growers, and the key chemical companies who could work together to get approval for the use of additional PPPs on specific crops.

Of prime importance to horticulture has been the E.U.'s provision of the "Essential Use Derogation" which enabled individual member states to apply for temporary deferment of the revocation of approval for substances where no suitable alternative was available for certain key applications. Many of these derogations expire in 2008 by which time the E.U. expects member states and their industries to have found and approved alternatives. Bord Glas and Teagasc, in conjunction with the Pesticide Control Service and the Irish horticulture industry, were granted approval for 13 essential uses.

Table 1. Examples of additional/new uses of plant protection products applied for under the different approval mechanisms and identifying their approval status.

Name of product	Active substance	Crop use applied for	Approval mechanism	Applicant	Approval status	Supplier of residue data
Pleneum WG	Pymetrizone	potatoes (<i>Solanum tuberosum</i>) (label) & cauliflower (<i>B. oleracea</i> Botrytis Group), cabbage (<i>B. oleracea</i> Capitata Group), Brussel sprouts (<i>B. oleracea</i> Gemmifera Group), broccoli (<i>B. oleracea</i> Botrytis Group), kale (<i>B. oleracea</i> Acephala Group) (extension of field of use off label approval)	New registration & Extension of field of use	Company (for label recommendation for potatoes) & Bord Glas (for EFU to brassica crops as indicated)	Approved	Company
Hallmark (now "Karate" with full approval)	Lambda-Cyhalothrin	celery (<i>Apium graveolens</i> var. <i>dulce</i>)	Approval for a specified period (ASP)	Bord Glas	Approved	Company
Amistar	Azoxystrobin	e.g., tomatoes (<i>Lycopersicon esculentum</i>), strawberries (<i>Fragaria × ananassa</i>), cauliflower, Swedes (<i>B. napus</i> Napobrassica Group)	Extension of the field of use (EFU)	Bord Glas	Approved	Company
Amistar	Azoxystrobin	Protected lettuce (<i>Lactuca sativa</i>)	Extension of the field of use (EFU)	Bord Glas	Approved	HDC UK & Company
Apollo 50sc	Clofentezine	strawberries	Emergency use	Bord Glas	Approved (to Nov. 04)	Company

There are a number of different mechanisms available to obtain approval for products and/or uses. This includes a full authorisation for a new product not previously registered in Ireland. An extension of field of use (EFU) application can be made where a product is already approved for use in Ireland but the use of the product is required on additional crops. In particular circumstances an approval for a specified period may be sought. In extreme cases, where there is an outbreak of a critical pest or disease for which there is no control currently approved and where it can be shown that significant crop and commercial damage will be caused, an emergency use for a particular product can be applied for.

In each case the applicant (e.g., chemical company or industry group) has to provide relevant data packages (in particular residue data) to support the applications. The data may be in the possession of the chemical companies or it may be generated by research organisations such as the Horticultural Development Council (HDC) in the U.K., which works on behalf of growers to generate additional data to support applications for additional uses of PPPs in the U.K. From 2002 to July 2004 Bord Glas worked closely with certain chemical companies which have provided residue data to support applications by Bord Glas for certain EFU applications. Bord Glas has also had discussions with the HDC regarding the purchase of residue data to further assist in the application for EFU applications in Ireland. The HDC has indicated that it is willing to work with the Irish industry and provide residue data for an appropriate fee to assist applications. In fact last year one of the EFU applications granted by the PCS to Bord Glas was granted with residue data provided by the HDC. The fee for access to this particular data was paid for by the industry. Accessing of further data will be dependent on funds being made available by the relevant industry sector to purchase the residue data.

Certain new products have been identified as important by growers in Ireland but the companies which produce them have decided the market is too small to justify the cost of local registration. In these cases, Bord Glas had been liaising with these companies with a view to encouraging them to seek these registrations in Ireland, either by requesting them to submit the application or alternatively to provide the relevant data package so that Bord Glas itself, in conjunction with the Industry, could submit the application and pay the fee.

From 2002 to 2004, using the methods referred to above, several key PPPs or new uses have been approved (see Table 1).

CONCLUSION

It will be a continuing challenge for the horticulture industry to ensure that it has an adequate range of Plant Protection Products at its disposal to grow products commercially, to the quality required by the market. In due course, through the completion of the 91/414 E.U. review of active substances, "mutual recognition" between member states of the E.U. may result in registration of a wider range of products or uses in Ireland. However in the meantime it is incumbent on the industry to use the mechanisms identified above to work collectively and proactively with the relevant agencies to enhance the current range of products available and to fill any significant gaps that exist.