



Amenity - Best Practice

Using Pesticides in the Community



Introduction

Modern plant protection products, also known as pesticides, help safeguard our food supply by protecting crops against yield losses caused by weeds, diseases and insects.

Pesticides are also widely used outside food production to maintain our recreational, transport and amenity infrastructure.



The use of pesticides in the community plays a key role in enhancing our quality of life, for example by preserving the visual appeal of our parks and open spaces, by improving the quality of our sports pitches and golf courses, and by maintaining the safety of our road and rail networks.

This booklet provides an explanatory guide to the use of pesticides in the community, and an introduction to Best Practice for users in the amenity sector.

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THERE ARE FOUR MAIN TYPES OF PESTICIDES:

- **Herbicides** to control weeds and unwanted vegetation such as thistles and nettles;
- **Fungicides** to combat harmful diseases that infect the plants we use;
- **Insecticides** to control insect pests such as aphids and leatherjackets;
- **Plant Growth Regulators** to control plant-growth including grass.



The use of pesticides in our community

PESTICIDES PLAY A KEY ROLE IN MAINTAINING THE QUALITY AND SAFETY OF OUR COMMUNITY AND PUBLIC SPACES SUCH AS PARKS, FOOTPATHS, ROADS, SPORTS PITCHES AND GOLF COURSES.

Pesticides ensure we have access to sufficient quantities of good quality, affordable food-stuffs and enable us to have clean urban environments. They help maintain our transport infrastructures, sports and public recreational facilities, as well as controlling damaging invasive species, which can have an adverse effect on our ecosystems.

The use of modern pesticides is safer today than ever before; for people, animals and the environment.

FACTORS THAT HAVE CONTRIBUTED TO THIS INCLUDE:

- Enhanced effectiveness of products in targeting specific pests;
- Progress in formulation technology and packaging;
- Improved application equipment technology, allowing more targeted application;
- Improvements in the advice given on pesticide use.*



*All advice on the use of pesticides has to be given by a BASIS qualified advisor. BASIS (Registration) Ltd is an independent, self-regulatory registration, standards and certification scheme, serving the pesticide and fertiliser industries.



Why use pesticides?

PESTICIDES ARE USED IN OUR COMMUNITIES FOR A VARIETY OF REASONS:

TO PROTECT PUBLIC HEALTH

Herbicides can control vegetation in urban areas, that might otherwise harbour vermin such as rats and mice.

Insecticides can control disease-bearing pests, such as fleas, flies, cockroaches and mosquitoes.

TO ENSURE SAFETY AND ACCESS

Herbicides and plant growth regulators are used to control weed and grass growth that would otherwise:

- Obscure warning and direction signs, reducing visibility on our transport infrastructure;
- Obstruct access for essential maintenance work;
- Create a fire hazard;
- Cause people to slip or trip and injure themselves;
- Block drainage channels, causing flooding during heavy rainfall;
- Damage footpaths and road surfaces.



TO MAINTAIN AESTHETIC VALUE

Pesticides make a valuable contribution to ensuring our public spaces maintain their visual appeal by:

- Removing unsightly weeds from footpaths and amenity areas such as parks, cemeteries and other public areas;
- Improving the growth of trees and shrubs by removing competition for nutrients and water;
- Controlling weeds, pests, diseases and growth in turf, especially on sports turf where good playing surfaces are essential, such as golf courses, cricket pitches and bowling greens.



TO BENEFIT THE COMMUNITY

Pesticides are used to control problem weeds and pests ensuring the public have year round access to sports facilities and parks. This benefits our health and quality of life by:

- Helping to reduce obesity and blood pressure;
- Improving fitness and mental health;
- Improving community spirit.

TO COMPLY WITH LEGISLATION

Herbicides are used to comply with specific legislation on the control of some weed species which can have a detrimental impact on our natural ecosystems:

- The Noxious Weeds Act (1959) requires landowners to eliminate scheduled weeds, such as ragwort, various thistles and docks to prevent the seeds contaminating neighbouring land.
- The Wildlife and Countryside Act (1981) specifies control of certain plants, such as Giant Hogweed and Japanese Knotweed.

IMPROVE ECONOMICS AND EFFICIENCY

Using pesticides to control weeds, pests, grass growth and diseases can be significantly less expensive and more cost-effective than using mechanical controls, for example by:

- Making it possible to treat large areas in a shorter amount of time;
- Reducing the need for follow up maintenance work such as road repairs;
- Avoiding physical damage to trees, shrubs or other items caused by mechanical tools;
- Keeping waterways clear of weed growth which can impede flow leading to flooding and pumping costs.



	Hand and/or mechanical control programme	Basic herbicide programme	Annual saving using pesticides
Roadside verges and central reservations	£850-1,000/km per cut	£75-100/km per application	Over 600 km = £540,000
Leisure and amenity areas	£85/100m ²	£5/100m ²	Over 60 ha = £480,000
Footpaths	£1200/km	£34-50/km	Over 600 km = £690,000

Pesticide legislation



PESTICIDE AUTHORISATION

All pesticides used in the United Kingdom must be authorised by the Chemicals Regulation Directorate (CRD) of the Health and Safety Executive (HSE).

European Union legislation (Regulation (EC) No. 1107/2009) harmonises the registration of plant protection products across member states and ensures that they are safe to use. This EU legislation was implemented into law via the Plant Protection Products Regulations 2011, with similar but separate versions in Scotland and Northern Ireland.

Once an active substance is on the European approved list, products containing the substance can be approved by member states for sale and use in that country.

It is illegal to market or use a product introduced from another EU member state, unless it has been granted a Parallel Trade Permit confirming that it is identical to one already authorised in the UK.

All UK approved pesticides have a MAPP number. The CRD website contains a database of all approved products. If you are unsure of the approval status of a pesticide product, always check the product label and the CRD database at www.pesticides.gov.uk.

SUSTAINABLE USE OF PESTICIDES

The EU Directive on the Sustainable Use of Pesticides aims to reduce the risk to human health and the environment. This was implemented into UK law via the Plant Protection Products (Sustainable Use) Regulations 2012.

The Regulations contain many requirements that were already part of UK pesticide legislation. However, this legislation introduces some new and future change. The onus is on the person specifying the contract, as well as those carrying out the work, to ensure all pesticide application is conducted in line with legal requirements.

A copy of the Plant Protection Products (Sustainable Use) Regulations 2012 is available to download from the CRD website along with the Code of Practice for using Plant Protection Products.

This gives advice on the safe use, storage and disposal of pesticides. It is important to ensure you are operating within the new legal requirements.

WATER FRAMEWORK DIRECTIVE

The EU Water Framework Directive aims to minimise the amount of pesticide in surface and ground waters. This important piece of legislation requires all EU member states to put in place a range of environmental control measures, including monitoring point source and diffuse pollution.



The key points regarding protecting water quality include:

- Careful targeting of application;
- Minimising the risk of spray drift and run-off;
- Preparing pesticides in a safe environment and avoiding spillages;
- Using products that present a low overall risk to the aquatic environment;
- Carefully disposing of dilute pesticide waste and packaging.

HARD SURFACE HERBICIDE APPLICATION

The CRD's official definition of a hard surface is: *"Any man-made impermeable surface, such as concrete or asphalt and including railway ballast, that is not intended to bear vegetation."**

In November 2011, the Health and Safety Executive issued Regulatory Update 42/2011, confirming the requirement for hard surface herbicide applications to be targeted. The following wording appears in the 'directions for use' section of all labels for hard surface approved products.

* Although railway ballast is classified as a hard surface, HSE Regulatory Update 42/2011 is not applicable to products specifically authorised ONLY for use on railway ballast.

Products which act only by contact or systemic action via foliar application:

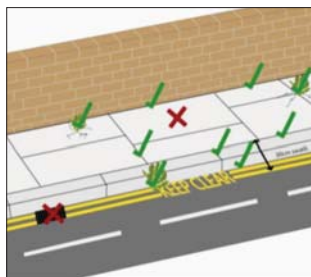
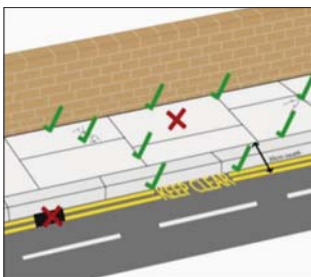
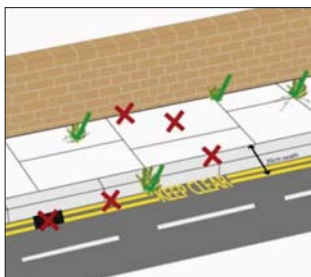
"Apply this product carefully. Ensure spraying takes place only when weeds are actively growing (normally March to October) and is confined only to visible weeds including those in the 30cm swath covering the kerb edge and road gully - do not overspray drains."

Products which act only in a residual fashion

"Apply this product carefully. Ensure spraying takes place only to areas of potential weed growth (e.g. gaps between paving stones, kerb edges and road gulleys) and/or a 30cm swath covering the kerb edge and road gully - do not overspray drains".

Products which contain more than one active substance, at least one of which acts by foliar application and at least one of which acts in a residual fashion:

"Apply this product carefully. Ensure spraying takes place only when weeds are actively growing (normally March to October) and is confined only to visible weeds, areas of potential weed growth (e.g. gaps between paving stones, kerb edges and road gulleys) and/or a 30cm swath covering the kerb edge and road gully - do not over-spray drains."



Best Practice

Pesticides play an important role in keeping our amenity areas clean, safe and accessible. The amenity industry has worked to establish Best Practice for pesticide use, to ensure products are applied in a responsible manner. The following is intended as an overview of Best Practice.

For further details regarding the requirements of pesticide use refer to the Code of Practice for using Plant Protection Products or visit www.pesticides.gov.uk.

Before any pesticide is applied there must be an evaluation of whether control is really required. Setting clear and realistic management objectives for each site is the key to effective control of amenity vegetation.

INTEGRATED PEST MANAGEMENT

Before applying any pesticide, advice should be sought from a BASIS qualified advisor as to which product(s) are most appropriate to the specific problem and situation.

The setting of clear and realistic management objectives for a site is the cornerstone of the successful control of amenity vegetation. For example, an intensively managed formal landscape will differ from a low managed area of rough ground.

Pesticides should be used as part of an integrated approach to pest management. Some symptoms may be down to poor management or other cultural factors, and sometimes mechanical methods may be more appropriate. Integrated Pest Management includes a wide variety of approaches including biological, mechanical, cultural and chemical means of control.

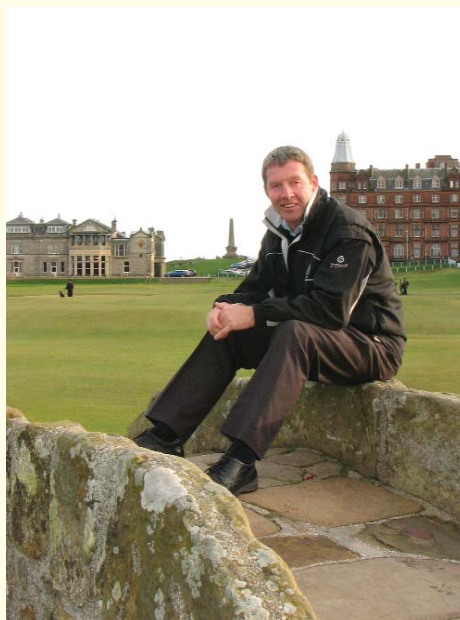
The aim is to minimise the use of pesticides whilst managing the problem at an acceptable level, using cost effective practices and products which represent the lowest risk to human health and the environment.



“A practical Integrated Pest Management policy is vital in the successful conditioning of St Andrews Links, including that of the world famous Old Course. We aim to present the courses in as natural condition as possible, encouraging the finer, indigenous grasses throughout, including the roughs.

“Using a selective herbicide on a restricted basis rather than carrying out a blanket application is an important part of that objective.”

Gordon Moir, Director of Greenkeeping,
St Andrews Links



APPLICATION

Anyone using a pesticide product must take all reasonable precautions to protect human health and the environment. This can include selecting the most appropriate product and method of application as well as using low risk products and application methods.



Pesticide application should be confined to the intended target area. For example, if an operator is spraying in unsuitable weather conditions, spray drift or run-off may occur, leading to contamination outside the target area. One way to help confine applications to the target area is to use application equipment that reduces spray drift and run-off.

In public areas such as roads, railways and other areas used by the general public, the amount of pesticide and the frequency of use should be kept to the minimum required to achieve effective control. Careful consideration should be given to product selection, appropriate application rates and dosage frequency.

All products should always be applied in accordance with the product label. Always select the most appropriate pesticide for the target and situation.



USING HAND-LANCES FROM VEHICLES

Best Practice guidelines issued by HSE state that a hand-lance should not be used whilst driving a moving vehicle as this prevents both safe control of the vehicle and accurate targeting of pesticide application.

The Best Practice for operators is to only use a hand-lance from a vehicle when the vehicle is stationary.

OPERATOR TRAINING AND CERTIFICATION

Professional pesticide users must hold a Certificate of Competence. It is Best Practice for operators to undergo refresher training to keep their skills up to date.

After 26 November 2015, operators will not be able to use the “Grandfather Rights” exemption. From November 2013, there will be a new Certificate of Competence replacing “Grandfather Rights”. Visit www.nptc.org.uk for more information.

Certificates are issued by the National Proficiency Test Council (NPTC). All operators are required to obtain a PA1 Foundation certificate, along with the module appropriate to the particular method of application e.g. PA6AW for hand-held application in or near water.

It is Best Practice for all operators to have regular refresher updates on pesticides and application. The best way to achieve this is for operators to join the National Amenity Sprayer Operators Register (NASOR), administered by NPTC.

NASOR membership provides operators with recognition of their training and development. Further information can be found by visiting www.nasor.org.uk.

It is Best Practice for anyone purchasing a professional pesticide product to make sure the person applying that product holds the necessary Certificate of Competence. This will be a legal requirement.

STORAGE

There is a requirement to take reasonable precautions to ensure that storage, handling and disposal of products, their remnants (old products and unused tank mixes), packaging and cleaning of equipment, do not endanger human health or the environment.

Stores should be constructed in such a way as to prevent any unwanted release of pesticide products:



- Stores must be dry, secure and well lit;
- Do not have unapproved pesticides in your store;
- Always store pesticides in their original container;
- Always keep an up to date stock record and keep a copy away from the store;
- Ensure the store is leak-proof and has the capacity to cope with 110% spillage of its contents (185% if in an environmentally sensitive area);
- Have suitable equipment for dealing with spillages and contamination.



DISPOSAL

Dilute pesticide waste is best avoided by only preparing the quantity of product required at any one time. You can spray any remnants to the treatment area, as long as the overall dose does not exceed the maximum allowed for that product. Store any left over pesticide waste in a suitable container until collected by a licensed waste contractor.

Always dispose of packaging in line with the Code of Practice for using Plant Protection Products and in accordance with the product label.



Product specific information

PLANT GROWTH REGULATORS (PGRs)

Plant growth regulators are primarily used in amenity situations to reduce turf growth and enhance the density and quality of playing surfaces. Reduced mowing can help to cut the costs and the carbon footprint of grass management, as well as reduce disruption to players and public. It also reduces the volume of clippings for removal and leaves a cleaner finish.

Plant growth regulators (PGRs) are taken up by the growing plant, so should only be applied whilst turf is actively growing, typically when soil temperatures reach a consistent 7-10°C in the spring. As growth slows in the late autumn, applications should be extended or stopped, according to prevailing weather conditions and soil temperatures.

- Increase the frequency and/or application rate* during periods of strong growth - typically spring and early summer;
- Reduce frequency and/or rates during periods of slow growth - such as drought or extreme heat.

* Refer to specific product labels for maximum application rates and spray intervals



All current PGRs are applied as a spray liquid and may be applied with knapsack sprayers, hand sprayers, boom sprayers and spray-gun application devices, where label recommendations permit. Ensure that the sprayer or other applicator is clean and calibrated to give the correct volume and an even application.

Target PGR spray applications to optimise retention on the plant leaf, including appropriate selection of:

- Nozzle technology;
- Operating pressure;
- Spraying speed;
- Water volume.

Most growth regulator formulations are rainfast within one hour of application. Do not apply if rainfall is imminent, or if wind conditions may create a risk of drift.

Turf PGRs have little or no effect on other broadleaved weeds or plants, but avoid over spraying and minimise spray drift onto non-target areas or bare soil.

Growth regulators may be applied in conjunction with line marking paint on sports turf pitches, to increase the durability of line visibility. Follow label recommendations to ensure the correct concentration of growth regulator.

HERBICIDES

Herbicides are used in amenity situations primarily to control unwanted vegetation, enhancing the leisure, urban or industrial environment, or to reduce the risks that can be posed by weed growth.

Herbicide application timing

Herbicides work in different ways and therefore operators should always consult the product label for instruction on the most appropriate time of application. One of the most common active ingredients is Glyphosate, which needs visible growth present at the time of application, and for the plant to be actively growing, in order to be effective. Active growth usually occurs between March and October.

LERAP requirements

Always refer to specific product labels before use to determine if it qualifies within the Local Environmental Risk Assessment for Pesticides (LERAP) scheme.



Sprayer filling and operation

Where possible fill sprayers in a designated area with an appropriate management plan to deal with handling concentrate and washing equipment after use.

Rinse containers thoroughly at the time of use. Use an integrated pressure rinsing device or manually rinse three times. Add washings to sprayer at time of filling and dispose of safely.

Do not contaminate water with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from yards and roads.

Resistance management

Always follow a weed resistance strategy to avoid the development and proliferation of plants able to tolerate normal application rates of commonly used herbicides.

Use the minimum label rate recommended for controlling the toughest weeds present. Apply using application methods, timing and weather conditions as prescribed on the label.

Follow Integrated Pest Management including cultural control methods and tank mix or sequences of herbicides with alternative modes of action.



Product specific information

INSECTICIDES

Insecticides are used in amenity situations primarily to:

- Prevent the damage to plants caused by the feeding activity of insect pests;
- Prevent damage caused by predators feeding on the insects;
- Avoid public health issues associated with insect populations.

Insecticides are principally applied as spray applications, using boom sprayers or knapsack applicators, or as granular application to turf surfaces.



Insecticide application timing

Application of insecticides at the appropriate stage in the life cycle of the target pest is essential. Some products may be aimed at the larval stage, for example, while others may be targeted to control adult insects.

A good understanding of the life cycle of the target pest, and the conditions that will influence its development, is important to achieve the best results from appropriate application timing. Refer to specific product labels for advice on the optimum timing for use.

LERAP requirements

Most insecticides qualify within the Local Environmental Risk Assessment for Pesticides (LERAP) scheme. Always refer to specific product labels for details.

Where required, either a LERAP must be carried out in accordance with CRD published guidance before each spraying operation from a horizontal boom sprayer or broadcast air-assisted sprayer, or the statutory buffer zone must be maintained.

The results of the LERAP must be recorded and kept available for inspection for three years.

Sprayer filling and operation

Operators must always follow specific product label advice for required protective equipment when handling insecticides during spray preparation and application. Where possible fill sprayers in a designated area with an appropriate management plan to deal with handling concentrate and washing equipment after use.

Rinse fungicide containers thoroughly at the time of use. Use an integrated pressure rinsing device or manually rinse three times. Add washings to sprayer at time of filling and dispose of safely.

Take special care not to contaminate water with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from yards and roads.



Integrated Pest Management with insecticides

Integrated Pest Management techniques can be effective in helping to reduce background insect populations. Measures include making conditions less hospitable to the pest species and creating habitats to encourage natural predators. Where pest numbers increase rapidly, however, insecticides may be required to prevent plant damage and protect public health.

Where possible, select insecticides that have minimal impact on natural predators and non-target insects and take extra care with application techniques to avoid non-target organisms or ecological habitats.

Adopt appropriate sprayer and nozzle technology to minimise risk of spray drift during application. Consider the use of buffer zones and tall vegetation to minimise risk of spray drift reaching environmentally sensitive areas.

Always remain extra vigilant when spraying in public access areas or where the public may come into contact with areas post-application.

Maintain accurate records of all product use and application conditions.

Product specific information

FUNGICIDES

Most fungicides used in amenity situations are applied as liquid spray applications. Refer to specific product labels to ascertain permitted application techniques, typically including a range of:

- Hydraulic boom sprayer;
- Air-assisted sprayer;
- Pedestrian or walk-over sprayer;
- Knapsack sprayer.

Apply fungicides to optimise spray deposition in the intended target area. Most foliar fungicides will be applied to target retention on the plant leaves. Avoid over-wetting of the leaf surface which can lead to excessive run off and spray loss. Soil-acting fungicides should be applied to ensure adequate penetration of product to the intended soil surface target.

Improved targeting of spray applications will include appropriate selection of:

- Nozzle technology;
- Operating pressure;
- Spraying speed;
- Water volume.

Always read the specific product label before use for COSHH requirements and recommended use of PPE when handling concentrate and during spraying operations.

Always remain extra vigilant when spraying in public access areas or where the public may come into contact with areas post-application.

Maintain accurate records of all product use and application conditions.



LERAP requirements

Always refer to specific product labels before use to determine if it qualifies within the Local Environmental Risk Assessment for Pesticides (LERAP) scheme. Where required, either a LERAP must be carried out in accordance with CRD published guidance before each spraying operation from a horizontal boom sprayer or broadcast air-assisted sprayer, or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for inspection for three years.

Sprayer filling and operation

Where possible fill sprayers in a designated area with an appropriate management plan to deal with handling concentrate and washing equipment after use.

Rinse fungicide containers thoroughly at the time of use. Use an integrated pressure rinsing device or manually rinse three times. Add washings to sprayer at time of filling and dispose of safely.

Do not contaminate water with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from yards and roads.

Adopt appropriate sprayer and nozzle technology to minimise risk of spray drift during application. Consider the use of buffer zones and tall vegetation to minimise risk of spray drift reaching environmentally sensitive areas.



Resistance management

Some plant disease pathogens are known to have developed resistance to specific fungicides used repeatedly for their control. In order to minimise the likelihood of the development of resistance, it is recommended that fungicides should be used in a programme alternated with products of different chemical groups and having different modes of action. Always apply fungicides in accordance with FRAC guidelines, using full recommended rates and utilising Integrated Pest Management practices that encourage healthy plants and reduce stress.

The Amenity Forum

The Amenity Landscaping Environmental Stewardship Forum is an independent body bringing together professional organisations with an involvement in the amenity horticulture sector.

Membership includes organisations from across the diverse amenity and horticulture industries, covering manufacturers, suppliers, trade associations, local authorities, and major users within the landscaping, sports and leisure sectors. Equally important are those members who represent training and qualification standards. The key Government agencies have an important observer role.



The objectives of the Amenity Forum are:

- To be the collective body representing the amenity industry, in relation to pesticide use and weed and pest control within the amenity sector;
- To lead, coordinate and encourage achievement of "Best Practice" objectives in amenity pesticide use;
- To coordinate and encourage the establishment of sustainable qualifications, training and CPD activity, specifically for the amenity sector;
- To organise activities within the Amenity Forum membership and linked organisations, such that Amenity Forum objectives are developed in a coordinated way.

Crop Protection Association

The Crop Protection Association (CPA) is a key voice of the UK plant science industry, working to promote the role of modern plant science in safeguarding our food supply and quality of life.

CPA members are involved in the development and manufacture of a wide range of plant science technologies which are of crucial importance to the cultivation and protection of food crops, protecting our gardens, woodlands, infrastructure and public places.

These include the formulation and manufacture of synthetic and bio pesticides, seed and plant breeding, agricultural biotechnology and the breeding of bees.

CPA is committed to explaining the role of the crop protection industry in these sectors and the benefits of its products to the community. This includes engaging in constructive and intensive dialogue with relevant stakeholders to ensure that these benefits are fully recognised and accepted.

Safeguarding our Food Supply and Quality of Life



Glossary

COSHH : Control of Substances Hazardous to Health
CPD : Continuing Professional Development
CRD : Chemicals Regulation Directorate
FRAC : Fungicide Resistance Action Committee
HSE : Health & Safety Executive
LERAP : Local Environmental Risk Assessment for Pesticides

MAPP : Ministerially Approved Pesticide Product
NASOR : National Amenity Sprayer Operators Register
NPTC : National Proficiency Test Council
PGR : Plant Growth Regulators
PPE : Personal Protective Equipment

ACKNOWLEDGEMENTS

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FURTHER INFORMATION

Crop Protection Association : www.cropprotection.org.uk

CPA Amenity : www.cropprotection.org.uk/sectors/amenity

Defra : www.defra.gov.uk

Chemicals Regulation Directorate - Pesticides : www.pesticides.gov.uk

Defra : UK Pesticides Strategy: a strategy for the sustainable use of plant protection products

Defra : Pesticides: code of practice for using plant protection products

**USE PESTICIDES SAFELY. ALWAYS READ THE LABEL AND
PRODUCT INFORMATION BEFORE USE**



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