



The
Voluntary
Initiative



Crop Protection
Association

For the
BENEFIT OF BIODIVERSITY

A BIODIVERSITY STRATEGY AND ACTION PLAN
for a **Better Environment**

The CPA wishes to acknowledge all the help provided by the Game Conservancy Trust, Farming and Wildlife Advisory Group, Linking Environment And Farming and our member company biodiversity contacts in drawing together this Biodiversity Strategy and Action Plan.

We also wish to thank the Biodiversity Policy Unit of the Department for Environment, Food & Rural Affairs, Earthwatch, English Nature and the Royal Society for the Protection of Birds for their advice.

And finally, for the assistance and comments made by the Chair and members of the Voluntary Initiative Steering Group.



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“For the Benefit of Biodiversity”

Introduction by Peter Sanguinetti

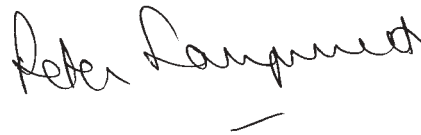
Farmers live close to nature and respect it but they have to make a living and produce much-needed food. For the past five decades political emphasis has been on the production of food and self-sufficiency. However, surveys have now confirmed a decline in numbers of many farmland species and their preservation within the UK has rightly become a priority.

The Voluntary Initiative, supported by a diverse range of organisations sets in motion a significant programme of work to help arrest the decline and achieve a better balance. To achieve success it requires wide understanding and support. That will enable vision to become reality.

This Biodiversity Strategy and Action Plan developed for the crop protection industry is a key project within the Voluntary Initiative. It is a vision we want to become reality. It hinges inherently on educating and persuading farmers to implement vital improvements in process to the benefit of biodiversity. This requires conviction and motivation.

To be successful, implementation of the Plan needs to be considered within the context of the current dire status of the rural economy and recent recognition by the European and national governments that farmers need to be rewarded for environmental activities. In his Mid-Term Review Commissioner Fischler recommends diverting a proportion of production support towards environmental projects and the UK will need its appropriate share. It was encouraging that Secretary of State Margaret Beckett successfully persuaded the Chancellor to commit significant funds for the Curry proposals in his last budget.

The Voluntary Initiative is a long-term strategy and a major programme. It represents a revolution, not a quick fix. The Government can make a significant difference to the success of this laudable investment for the benefit of biodiversity by giving strategic encouragement. It would send the right messages if, for example, it removed the threat of a tax at a time when farmers' incomes have collapsed to below the minimum wage. They can ill-afford the extra costs.



Peter Sanguinetti

Statement of Intent

This 'Biodiversity Strategy and Action Plan' (BSAP) aims to recognise, develop and co-ordinate the crop protection industry's efforts to promote best practice in the use of its products. In this way it seeks to ensure that the impact of crop protection products on the environment and wildlife is minimal and that the need for our products is always considered within a system of 'Integrated Crop Management' (ICM) and within the scope of a 'Crop Protection Management Plan' (CPMP).

This strategy has been produced on behalf of its member companies (see Appendix 1) by the Crop Protection Association (CPA).

The Plan sets out the steps the industry is adopting to achieve a responsible approach to biodiversity issues, working where possible alongside wildlife and

environmental organisations, and gives examples of industry-supported projects to maintain and enhance the variety of life associated with farmland habitats. In highlighting these examples of industry best practice we aim to stimulate further activity within the sector. This work reflects the industry's concern to protect the arable farmland habitat, ensure adequate food supplies and safeguard a vibrant rural economy. It is also undertaking to play a greater role in the success of the wider UK Biodiversity Action Plan (UK BAP) by working alongside farmers to leave a softer environmental footprint.

In short, we hope that *'For the Benefit of Biodiversity'* provides a clear strategy for the UK crop protection industry to promote biodiversity within a sustainable farming environment.

Executive Summary

1. Introduction and background

Biodiversity has been defined as the 'variety of life' on earth, essentially all genetic biological diversity.

It encompasses all living things not just species

which are rare or threatened. But biodiversity is such an all-embracing concept that it is easy to feel swamped by its scale and complexity. In such situations the only sensible way forward is to focus on those aspects where a positive impact can be made. We therefore plan to concentrate our efforts on those areas where the industry has real influence and where we can bring about change.

This plan focuses primarily on lowland arable farmland - an area representing nearly one quarter of UK land and the principal area where crop protection products are used. Traditionally, it is a diverse habitat for many of our most loved birds, wild flowers and mammals but recent surveys have confirmed declines in numbers of many farmland species, hence, the preservation of these lowland farmland species has become a priority.

This 'Biodiversity Strategy and Action Plan' (BSAP) is part of the *Voluntary Initiative*. This five-year programme of measures has been developed by a partnership of organisations and agreed with Governments as a way of minimising the environmental impact of modern farming and raising awareness of how best to protect biodiversity in such systems. The focus on biodiversity is one of the three key elements of the whole *Voluntary Initiative*.

The crop protection industry wants to work in partnership with governments and wildlife organisations to 'protect, conserve and enhance' the richness and diversity of wildlife associated with farmland habitats. We believe the way to achieve this is within a sustainable integrated

farming system. An integrated approach will deliver viable farming and hence the food we need, at the same time as protecting the environment. Ten years of research by the Integrated Arable Crop Production Alliance has confirmed the environmental benefits of the integrated approach. In addition, focusing on the specific needs of non-crop areas as part of the whole-farm approach is required. This is actively promoted by Farming and Wildlife Advisory Group (FWAG) and Linking Environment And Farming (LEAF) and is the key to building on the ICM approach for the future.

It is now considered that changes in cropping practices such as the trend away from spring-sown to winter-sown cereals coupled with reductions in rotational cropping, soil degradation and increased cultivation, also have an impact on local ecology along with the use of crop protection products. Seasonal fluctuations in weather can also affect species survival rates. However, the indirect effects of some aspects of successful crop protection, such as the loss of insect and wildflower seeds which form essential food sources, have been identified as one of the contributing factors in the decline of at least two bird species; the grey partridge and the corn bunting. This is of great concern to the crop protection industry and by working with farmers, via our advisors we aim to improve the environment to benefit not only these species but also wider arable biodiversity.

As a responsible industry, we also actively promote 'best practice' for use of our products within the home garden and amenity sectors.

2. Objectives, strategy and success criteria

The overall goal for the crop protection industry is **to play its full part in improving the rich and diverse wildlife associated with farmland habitats**. This will be achieved by:

- Raising the awareness and profile of biodiversity among our members;
- Highlighting the role of the industry in reaching the UK BAP targets for key lowland farm habitats and species;
- Focussing attention on those aspects of biodiversity where we have influence and can bring about positive change, in partnership with others;
- Providing a clear mechanism for our member companies to integrate 'biodiversity' into their own management practices.

Our strategy will be to support the wide-scale adoption and further development of Integrated Crop Management (ICM) and the use of Crop Protection Management Plans (CPMPs) to benefit biodiversity. This will be achieved via the provision of advice to farmers via our network of advisors. Working in partnership with other organisations, such as FWAG and LEAF to promote biodiversity as part of a whole farm approach will also be key to the successful promotion of biodiversity as part of ICM and the use of CPMPs. Such a strategy will require a better understanding of the interactions between farming and wildlife, using a training and communications infrastructure which allows all those taking decisions on farm to be aware of the biodiversity implications of their actions.

The CPA and its members have agreed a three-pronged approach:

- **Research** - Nearly £3 million has already been committed to the governments Sustainable Arable LINK research programmes, such as participation in

the ground breaking project SAFFIE (Sustainable Arable Farming For an Improved Environment). In addition, contributions to wildlife surveys and actively keeping abreast of new biodiversity initiatives will be priorities.

- **Responsible management** (via training) - we will include clear and consistent guidance on best practice in product use, advocating and providing training in CPMPs, the production of Environmental Information Sheets (EISs) and an increased awareness of biodiversity among staff at all levels within member companies.
- **Stewardship and communication** - including training in biodiversity for agronomists and advisors, joint forums on biodiversity and promotion to farmers at major industry events like 'Cereals 2003'.

The key indicators of success for this approach as part of the overall *Voluntary Initiative* (VI) are those which have been agreed by the *Voluntary Initiative* Steering Group, namely:

- Stabilising population trends for grey partridge and corn bunting;
- Increased areas of cereal field margins under specific prescriptions to protect wildlife;
- Area and number of farms with CPMPs;
- The number of environmentally trained farmers and agronomists.

The Voluntary Initiative Steering Group will also be considering the adoption of other relevant new indicators when they are developed.



Executive Summary

3. Action Plans

Clear and detailed action plans showing the ways in which the crop protection industry will act to benefit biodiversity cover the following key habitats and species:

Habitats

- Ancient/species rich hedgerows;
- Cereal field margins;
- Permanent pasture and grass leys;
- Farm watercourses, wetlands, ponds and fens;
- Non-agricultural land areas - gardens and amenity areas;

Species

- Grey partridge;
- Corn bunting.

These two bird species have been chosen as emblem species. Management measures which benefit them will also raise the overall value of the arable farmland environment for other birds, mammals, arable plants and insects.

4. Implementation and review

Several criteria are proposed for which progress can be monitored via the implementation of the BSAP. Key among these is that:

- The CPA will seek partnerships with both farming and wildlife organisations to benefit biodiversity;
- A nominated person responsible for biodiversity, in all member companies as part of the 'Biodiversity Network';

- A policy statement which integrates biodiversity into member companies corporate management systems, so that the biodiversity awareness of their agronomists and technical advisors is raised;
- Biodiversity seen as a key aspect for companies within their own site or system management practices;
- Ongoing research funding within the *Voluntary Initiative* which lead to useful 'Technology Transfer' of the key biodiversity messages to our members and farmers;
- At least 500 agronomists undertaking recognised training in biodiversity and conservation awareness by April 2006.

Initial progress made within each company against these success criteria will be reviewed in April 2003. The overall aim is for all members companies to be actively implementing the measures specified in this plan by April 2004.

Introduction and Background

The CPA is the voice of the UK crop protection industry and is '*championing biodiversity*' across its sector as part of an overall commitment to the Voluntary Initiative and to promote sustainable farming.

1. Biodiversity defined

Biodiversity has been defined as the 'variety of life' on earth, essentially all genetic biological diversity. It encompasses all living things and not just species which are rare or threatened. Maintaining the quality of the earth's ecosystems is the key. However, if a species starts to decline this may signify that there is a potential loss of stable 'biodiversity' levels, which is therefore of concern.

Such concern was the driving force behind Article 6 of the *Convention on Biological Diversity* agreed at the *Rio Summit* in 1992. In response, the UK Government published the UK Biodiversity Action Plan in 1994. This and subsequent action plans for individual species and habitats published between 1996 to 1999, states the action required to safeguard our country's biodiversity for the future and set targets for species stabilisation and restoration of habitats that span the United Kingdom.

The conservation of biodiversity is such an all-embracing concept that it is easy to feel swamped by its scale and complexity. The only sensible way forward is for the CPA to focus on those aspects where a positive impact can be made. There is little point in the CPA making sweeping statements about trying to improve every aspect of farmland biodiversity. We must concentrate our efforts in partnership with others, on key areas where together we will have real influence and where we can bring about change.

This plan will therefore concentrate primarily on how our member companies can work with farmers to improve biodiversity on lowland arable farmland. This is the principal area where crop protection products are required and represents one-quarter of the UK land area. Traditionally it provided a diverse and broad habitat for many of our most loved birds, wild flowers and mammals. However, we also recognise the role of gardens and amenity areas in providing a valuable habitat for wildlife and so the plan also includes advice to promote the best use of our products within these areas.

Following surveys (in particular the BTO Common Bird Census) which confirmed declines in numbers of many farmland species, their preservation within the UK has become a priority. In particular, of major concern to the industry are declines in the numbers of farmland birds (e.g. grey partridge, skylark, lapwing and corn bunting), mammals (e.g. pipistrelle bat and brown hare), rare arable plants (e.g. cornflowers, shepherd's needle, corn buttercup and spreading hedge parsley), and butterflies (e.g. pearl-bordered fritillary).

Introduction and Background

2. Biodiversity and the *Voluntary Initiative*

The Voluntary Initiative is a five-year programme of measures developed by a partnership of farming organisations and agreed by the Government as a way of minimising the environmental impact of crop protection products.

The partners to the *Voluntary Initiative* comprise the CPA, the National Farmers' Union of England and Wales, NFU Scotland, the Country Land and Business Association, the UK Agricultural Supply Trade Association, the National Association of Agricultural Contractors and the Agricultural Engineers Association. The Ulster Farmers Union was also involved in the consultations.

The *Voluntary Initiative* is made up of 24 projects centred on three key elements. The focus on biodiversity is one of the key elements.

THE VOLUNTARY INITIATIVE

24 Proposals

Key Survey of Current Application Practices	Adoption of Crop Protection Management Plans	Structural Commitment to Biodiversity
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Within this programme, CPA aims to:

1. Raise the profile of biodiversity among our members by developing this 'Biodiversity Strategy and Action Plan'.
2. Highlight the role of the industry in contributing to the achievement of the UK BAP targets for farmland habitats and species.
3. Provide a clear mechanism for our member companies to integrate 'biodiversity' into their own management practices.
4. Continue to promote Integrated Crop Management (ICM) and the use of Environmental Information Sheets (EISs) and Crop Protection Management Plans (CPMPs).
5. Participate in the Sustainable Arable Farming for an Improved Environment (SAFFIE) project (see page 27).
7. Promote the development of 'Environmental Information Sheets' (EISs) for all products supplied by our member companies so that concise and consistent information on the environmental impact of products is available to agronomists and advisors, including those in the amenity sector as well as farmers.
8. Continue to promote 'best practice' in the use of our products in the agriculture, amenity and home garden sectors.
9. Monitor progress made by our member companies in accordance with this plan.

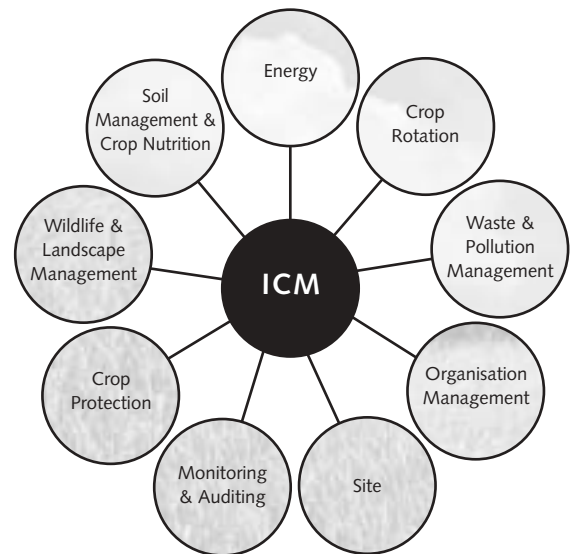
Introduction and Background

3. Integrated farming as a way forward

The crop protection industry, in partnership with farmers, government and wildlife organisations, wants to see improvement in the richness and diversity of wildlife associated with farmland habitats. We believe the only way to achieve this is within a sustainable integrated farming system. Promoting an integrated approach is the solution for delivering viable farming (hence the food we need) and protecting the environment. It aims to ensure the long-term survival of viable populations of birds and mammal species as well as the primary arable plants and the invertebrates which depend upon those plants, whilst at the same time allowing farmers to grow food and manage the countryside landscapes that we all enjoy.

Best practice in the use of crop protection products within Integrated Crop Management (ICM) has been promoted by the industry and through Linking Environment and Farming (LEAF) for the past 10 years. Two primary routes have been used by LEAF: the LEAF audit, which encourages continuous improvement in environmental standards on the farm and the network of LEAF demonstration farms, where farmers can see practical ICM in action.

The Integrated Arable Crop Production Alliance (IACPA) defines ICM as *'a whole farm policy aiming to provide the basis for efficient and profitable production which is economically viable and environmentally responsible. It integrates beneficial natural processes into modern farming practices using advanced technology and aims to minimise the environmental risks while conserving, enhancing and recreating that which is of environmental importance'*.



As can be seen from the ICM wheel (above), the consideration of wildlife and conservation measures is an essential component of ICM. Raising awareness of this biodiversity focus is the key. Within ICM the use of all inputs including crop protection products is carefully evaluated, balancing the need to protect and maintain non-target organisms (natural predators and wild flowers), against the need to prevent crop failure and to protect the public against naturally occurring but harmful pathogens such as mycotoxins.

Predicting the likely extent of a pest problem is a key part of the process. Essential in this are field records which map previous weed problems, weather forecasts to help with insect pest or disease predictions and computer models. Having predicted what is likely to appear correct identification is the next step followed by an evaluation of whether the level of infestation merits treatment.

Introduction and Background

Valuable aids to this part of the decision process are insect trapping and disease diagnostic tools combined with regular field inspections and the use of pest thresholds, where they are known. Traditional practices, such as crop rotation and cultivation, are also used to prevent the build-up of weeds, insect pests and plant diseases.

Such measures are also the mainstay of crop protection within organic farming, along with the use of certain permitted pesticides. In addition, to reduce invasive weed species within organic systems practices such as mechanical weed control are often required. Unless care is taken use of such machinery can be damaging to ground-nesting birds.

In the UK, conversion of land into organic production has been encouraged to fulfil market demand and reduce the level of imported organic produce. This has produced a profitable niche market for some growers. However final yields from organic systems can be considerably lower than those from integrated and conventional farming.

The CPA believes the ICM approach, which embraces the best aspects of new chemical or biological technology whilst respecting the role that farming systems can play in providing a rich environment for wildlife, is the most practical way forward for sustainable farming in the UK.

4. Research findings

Following more than ten years of research into ICM conducted by the Integrated Arable Crop Production Alliance (IACPA), a number of environmental benefits have been identified, particularly in the work conducted in the LIFE (Less Intensive Farming and the Environment) project and the RPMS (Rhône Poulenc Management Study).

- ICM results in a more diversified farm mosaic - encouraging biodiversity and a more varied landscape. In general at all sites, habitats were created and hedges/field boundaries managed to encourage beneficial invertebrates. The LIFE project measured the increase in biodiversity arising from the improved continuity of habitat for wildlife. The species richness of the non-cropped area on the farm - hedgerows, trees, grass, farm hedges and field margins - was increased from an overall level of 24 in 1993 to 76 in 1995;
- Well managed, hedges and field margins (encouraged by ICM) are important to wildlife with over 90% of farmland biodiversity being found in these areas;
- Birds showed a marked preference for non-ploughed fields. One of the beneficial results for biodiversity of switching from conventional ploughed fields to integrated direct-drilled or "min-tilled" stubbles was an increase in the numbers of bird species recorded;
- Reduced ploughing regimes also benefit earthworms. In the LIFE project earthworm populations were maintained under the integrated system at a time when populations had fallen in the conventionally-managed plots.

Introduction and Background

Despite the concerns about the impact of crop protection chemicals upon biodiversity, studies such as the government-funded TALISMAN and SCARAB projects have shown that the direct environmental impacts of correctly applied pesticides within an ICM system are in the main small or transitory. It is now considered that changes in cropping practices such as the trend away from spring-sown to winter-sown cereals (reducing the availability of over-wintering stubbles for birds), coupled with reductions in rotational cropping, soil degradation and increased cultivation, also impact upon local ecology. Seasonal fluctuations in weather can also affect species survival rates.

5. Addressing indirect effects

However, wildlife researchers are also concerned about the indirect effects of successful crop protection, such as the loss of certain plant species which act as an essential part of specific insect life cycles and as direct food sources for certain birds.

In particular, this link has been well documented for both the grey partridge and corn bunting. This is of great concern to the crop protection industry. By working with farmers via our agronomists, we aim to play our part in improving the survival rates for both these key species.

An improvement in both these key bird species has been chosen as a success indicator of the overall Voluntary Initiative. This is because measures that improve the environment for grey partridge and corn bunting will also benefit other more widespread species in the UK, such as the yellow hammer.

6. A whole farm approach

CPA believes that the principles of ICM should be the mainstay of farming and that this is the best way we can effectively manage the remaining agricultural lowlands. Indeed, the amount of land available for food production in the UK is actually shrinking as more and more acres are taken for urban development and leisure purposes. This trend makes it essential that we use the available land intelligently.

ICM/IFM promotes the 'whole farm' approach advocated by wildlife organisations for farmland management. The greatest ecological opportunities are provided by the development and management of field margins, conservation headlands, hedgerows and uncultivated sites and where possible the adoption of a broader crop mosaic. These measures provide new habitats for plant and animal life to colonise, whilst acting as safe corridors for wildlife to spread across the country.

For these reasons, we wholeheartedly support the UK governments in their funding of the Agri-environment schemes. These ensure that farmers can manage existing habitats or establish new ones, within a profitable business. In line with the recommendations for England in the Policy Commission's report on Food and Farming, we would also like to see the widespread adoption of a 'broad and shallow' approach with a tiered system of agri-environment funding. This will enable all farmers to manage their land with greater care for biodiversity, whilst remaining in business.



Introduction and Background

7. Non-Agricultural Areas

Additionally, the need to ensure that 'best practice' is applied to use of our products in garden and amenity areas is recognised. Parks and gardens, golf courses and roadside verges provide a valuable habitat for UK wildlife.

For this reason, the merits of an integrated approach are now being applied within another project of the Voluntary Initiative to promote the concept of 'Integrated Amenity Management' to users of products within the amenity sector.

Our members involved in the home garden sector provide help-lines and advice to support best use of their products in order to protect wildlife.



1. Objectives

The overall goal for the crop protection industry is:

To play its full part in bringing an improvement of the rich and diverse wildlife associated with farmland habitats.

The specific objectives of our industry's Biodiversity Strategy and Action Plan are:

- To raise the profile of biodiversity among our members;
- To highlight the role of the industry in achieving the UK BAP targets for key lowland farm habitats and species;
- To focus attention on those aspects of biodiversity where we have influence and can bring about positive change;
- To provide a clear mechanism for our member companies to integrate biodiversity into their own management practices.

To achieve these objectives, our members companies need to integrate biodiversity into their business practices. Some of the larger companies already have an Environmental Management System (EMS) into which biodiversity action can be integrated, whereas some companies do not.

Therefore, to ensure that a full understanding of or commitment to biodiversity conservation is achieved the principles given in Figure 1 will need to be put into action. This model has been produced by Earthwatch², they are championing the business and biodiversity approach for companies working within the UK and at an international level, on behalf of the Department of Environment Food and Rural Affairs (DEFRA).

Following this model, CPA member companies will produce their own action plans which will help them to either integrate biodiversity considerations into their existing EMS or put in to practice specific biodiversity actions in the style of a EMS. Action plans can be specific to operational responsibilities, e.g. such as supply chain, product development and advisory services and where relevant implementation of a specific Site Action Plan, to encourage biodiversity on their land holdings (see AH Marks project on Page 31). This approach will ensure that efforts are not only focused in accordance with the CPA BSAP but that messages from senior management level are effectively communicated throughout the company. The overall aim is to ensure that advice given to arable farmers helps to benefit farmland wildlife across the UK, but via effective liaison with conservation organisations, positive change for biodiversity at a local level can also be achieved.

²Earthwatch are a non-confrontational environmental charity, Earthwatch Institute (Europe) is based in Oxford

Objectives, Strategy and Success Criteria

Five Steps to Integrating Biodiversity into an EMS

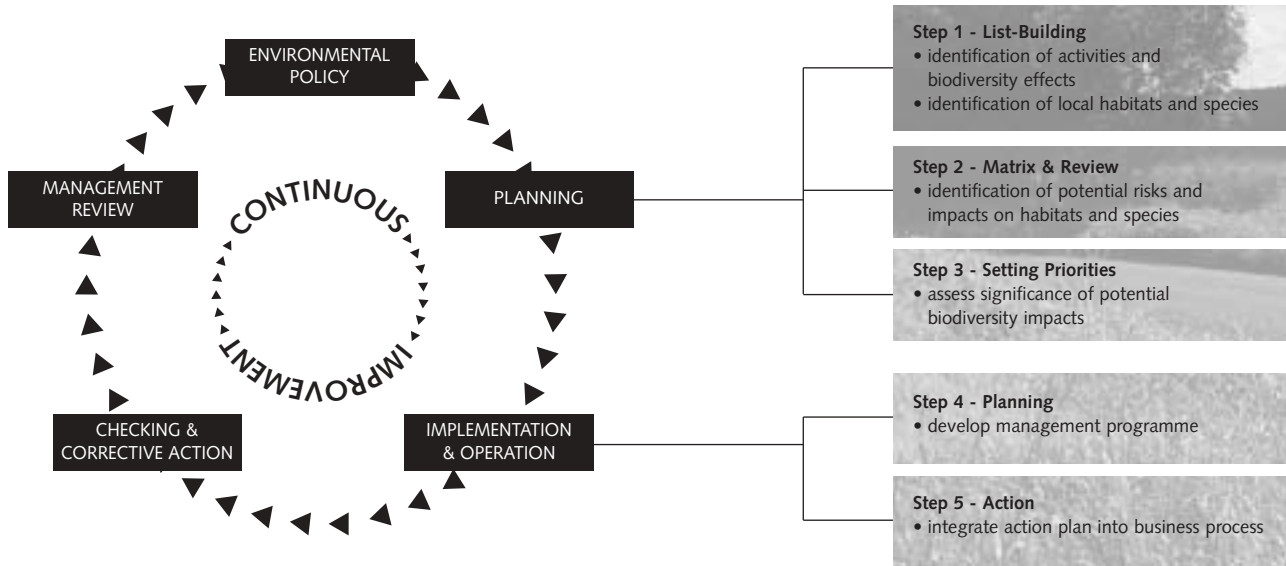


Figure 1: Integrating biodiversity into an Environmental Management System (Taken from 'A UK business guide for understanding and integrating nature conservation and biodiversity into environmental management systems' produced by Earthwatch)

2. Strategy

For the many reasons given earlier, CPA believes that the best strategy available to achieve its goal is the wider-scale adoption and further development of Integrated Crop Management. Such a strategy will require a better understanding of the interactions between farming and wildlife, via a training and communications infrastructure which allows all those taking decisions on farm to be aware of the wildlife implications of their actions. The CPA and its member companies have agreed a three-pronged approach, which will seek to raise the focus of biodiversity within the ICM concept. The CPA will work in partnership with FWAG and LEAF to achieve this.

- **Research;**
- **Responsible management via training;**
- **Stewardship and communication.**

The Action plans given later seek to embody this approach by using current research knowledge to provide key advice on practical management aspects to benefit key habitats and species and in communicating best practice in the targeted use of pesticides.

2.1 Research

To improve our understanding of the complex interactions between farming and wildlife CPA members are already committing nearly **£3 million** to the government's Sustainable Arable LINK research programmes.

Some examples of the projects are:

- Performance of application equipment and nozzle to prevent pesticide drift;
- To develop management strategies which will allow farmers to fulfil their environmental commitments without endangering profitable crop protection- 'making biodiversity work for the farmer (increasing beneficial insect numbers);
- To optimise the dose and frequency of fungicide applications and to identify means of making them more specific;
- To help develop new wheat varieties which have in built resistance to pests and diseases;
- To enhance farmland biodiversity by developing novel habitat management approaches;
- Novel pest control methods which involve more targeted active ingredients;
- Sustainable systems for the control of plant parasitic nematodes.

Through the Voluntary Initiative the industry has also committed itself to:

- Enhancing its commitment to the Sustainable Arable LINK programme;
- Organising environmental forums to underpin the research and technology transfer;

- Identify its long term research needs especially those which impact on the environment;
- Participate in relevant research collectively as the CPA, such as the Sustainable Arable Farming For an Improved Environment (SAFFIE) project (see page 29).

In addition, the industry will actively:

- Keep abreast of relevant new biodiversity research initiatives, for example those flowing from *Science In Action for Biodiversity - A report of the Biodiversity Research Working Group 1998-2001* workshops;
- Seek to contribute, as individual member companies, to projects within the scope of their business activities (examples of this are given in pages 29 - 34);
- Contribute via our network of agronomists and technical experts to appropriate wildlife surveys, such as the *Plantlife Common Plant Survey* and the *BTO-Hanson Business Bird Challenge 2002*;

To help farmers and their advisors we will also:

- Continue to focus our research and development to find better products;
- Work with other specialist partners to actively support the development of software to help farmers and advisors gain access to relevant biodiversity information.



Objectives, Strategy and Success Criteria

2.2 Responsible management (via training)

In order to raise awareness of biodiversity protection and conservation with crop protection product users we will:

- Provide clear and consistent guidance on best practice in product use. For example information on the potential impact of products on biodiversity is provided via Environmental Information Sheets (EIS). These provide valuable additional information to help users protect biodiversity. These can be found on the Voluntary Initiative web-site www.voluntaryinitiative.org - under environmental information. An example EIS is provided in Appendix 2;
- Raise awareness of biodiversity among our member companies by providing information via CPA's Biodiversity Network - named contacts charged with responsibility for biodiversity matters within their company;
- Promote training in Biodiversity as part of Project 11 of the Voluntary Initiative, within the BASIS Professional Register, and within the Plant Protection Award Examinations for our member company advisory staff. FWAG will be providing key biodiversity training to CPA agronomists and advisors to achieve this aim;
- Provide useful and specific 'in-field' advice to farmers on conservation measures via our network of agronomists;
- Encourage member companies to integrate biodiversity into their work practices, management systems and staff training. CPA members will actively work towards the establishment of an

internal Environmental Management System or accreditation to the ISO14001 Environment Management Standard (if applicable) within their businesses.

2.3 Stewardship and communication

As part of the *Voluntary Initiative* the Association has appointed a dedicated Biodiversity Officer who will play a key role in stewardship and communication activities such as the preparation of articles on biodiversity for farming journals.

In addition the industry's commitment to stewardship and communication will deliver:

- A *Biodiversity Information Forum (BIF)*. Biodiversity is already present as a key part of the *Voluntary Initiative* website. Links with the FWAG/LEAF websites will be made to ensure a consistent approach. Articles in the CPA's newsletter *Grapevine* and briefing notes for agronomists, as well as training workshops and seminars, will also form part of BIF;
- Funding of joint forums to enable the industry to discuss and promote practices to Biodiversity as part of our commitment to the UK Foresight programme;
- Effective oral communication of our efforts via presentations on the BSAP and industry's biodiversity initiatives at relevant conferences and other events;
- Articles offered to English Nature, RSPB, National Trust, FWAG, and Biodiversity News publications;
- Biodiversity advice for farmers and agronomists at annual shows and events such as *Cereals 2003*.

3. Success Criteria

Overall, the success criteria for the CPA's Biodiversity Strategy and Action Plan are linked to the biodiversity indicators chosen to gauge the success of the whole Voluntary Initiative across the UK. These indicators sit alongside those for avoiding water pollution.

Biodiversity Indicator	Data Resource	Current Status
Terrestrial Wildlife Population Trends for Grey Partridge and Corn Bunting	Common Bird Census Data produced for the Pesticide Forum Annual Report	Long term decline to less than 20% of 1970 population levels.
Area of Cereal Field Margins (under wildlife prescriptions)	DEFRA/PSD data produced for the Pesticide Forum Annual Report	In 2001, over 15,000 hectares of land was being managed according to the required cereal field margin prescriptions. Although there has been a gradual increase over time, there was a 57% increase in 2001 due to increased Countryside Stewardship funding.
The Voluntary Initiative Steering Group will also be considering the adoption of relevant new indicators when they are developed.		

There are two other relevant indicators which will benefit biodiversity,

- (1) The number of environmentally trained advisors promoting best practice in crop protection use.
- (2) The area and number of farms for which a Crop Protection Management Plan is being followed.

Targets for all these indicators are under review by the Voluntary Initiative Steering Group.

4. Meeting the challenge

The CPA member companies are already committed to implementing measures to comply with these success criteria.

The 'Biodiversity Network' of key contacts across the CPA member companies has been established and members are working towards defining their companies' statements on biodiversity.

All members are committed to providing training in biodiversity to their technical advisors.

Progress made against the success criteria within each company will be reviewed in April 2003 and key guidance provided by the CPA 'Biodiversity Officer' in partnership with others.

The overall aim is that by April 2004 all member companies will be providing biodiversity guidance, as part of the key habitat and species action plans and implementing the relevant aspects of this 'Biodiversity Strategy and Action Plan'.



Objectives, Strategy and Success Criteria

5. Key measurables

The following are key measurables which can be audited to track the success of setting up the BSAP and the progress made by all CPA member companies:

- All companies have a nominated person responsible for biodiversity matters and responding to the CPA Biodiversity Officer as part of the 'Biodiversity Network';
- All companies within the CPA have a recognised statement on biodiversity and are working according to the CPA BSAP;
- Both manufacturers and distributor companies have reviewed their position on biodiversity and are committed to improving the biodiversity awareness of their agronomists and technical advisors;
- The recognition of biodiversity is a key aspect for manufacturing companies within their own management practices, (via a Environmental Management System as part of the International Environmental Standard ISO 14001 if appropriate);
- Since obtaining the Environmental Standard ISO 14001 is not necessarily applicable to the Small and Medium Enterprises within the CPA, this group will consider how they can contribute to the management of habitats around their business sites or work with local authorities contributing to relevant Local BAPs (administered by County Councils, Wildlife Trusts and others) using the principals of an Environmental Management System approach;
- Ongoing research funding within the *Voluntary Initiative* leads to useful 'Technology Transfer' to our members and farmers. For example, farmers are aware of and encouraged to implement the ongoing results from the SAFFIE project, via our agronomists;
- Key technical staff in companies have undertaken training to raise their biodiversity awareness and can advise on crop protection use according to the product's Environmental Information Sheet;
- At least 500 agronomists undertake recognised training in biodiversity and conservation awareness by April 2006.

Action Plans

Habitats

The following key habitats have been identified as those where CPA member companies can have an impact by influencing the use of our products. They have been chosen to reflect the main uses of crop protection on farmland and pest and disease control within the urban environment:

- **Ancient/species rich hedgerows;**
- **Cereal field margins - conservation headlands, grass margins and beetle banks;**
- **Permanent pasture and grass leys;**
- **Farm watercourses, wetlands, ponds and fens;**
- **Non-agricultural land areas - gardens and amenity areas.**

The controlled use of crop protection products as part of an Integrated Crop Management approach, coupled with the additional advice given in the habitat plans detailed below, will have a positive benefit for all lowland farm biodiversity.

Likewise, the provision of focussed, simple messages to home garden and amenity users will help to protect wildlife in our parks, gardens and recreational areas.

In particular, the prevention of spray drift into waterways, wetlands and ponds will help alleviate any potential risk of damaging aquatic biodiversity.

Species

The intensification of agriculture in general is widely considered to be the major cause of decline for lowland bird species. But for the grey partridge and corn bunting, the removal of insects and the wildflower seeds by the use of crop protection on farms has been highlighted as an indirect effect. Since birds rely on the presence of plants and insects for survival, declines in their numbers and breeding success, may indicate that damage to the whole ecosystem is occurring.

However, since it is not possible for the CPA in isolation to change all aspects of farming practice, we are focusing our efforts on providing clear and consistent environmentally safe crop protection advice to farmers, to protect wildlife. The **grey partridge** and **corn bunting** are our emblem species and have been chosen because we already have good population data to study and compare, whereas this is not the case for others vulnerable species such as wildflowers. It is very much hoped that enhancing arable areas for these birds will also benefit a broader range of birds, such as the yellow hammer and mean that the whole arable ecosystem is improved.

Our support of the SAFFIE project also aims to help farmers to deliver wider biodiversity benefits. SAFFIE will be measuring how changes in crop architecture and margin management and the application of ICM can bring benefits to many species including birds, insects and wild plants.

These Action Plans provide a broad framework for conservation management. More detailed advice, relevant to key habitats and species, should be sought from the Game Conservancy Trust, FWAG advisors, LEAF farmers and other conservation organisations.



Action Plans

Habitat	Objectives	Management Aspects	Action	Mechanism
<p>Ancient/species rich hedgerows <i>Associated species:</i> Grey partridge, song thrush, tree sparrow, elm-lichen, pipistrelle bat, dormouse. Yellowhammer.³</p>	<p>CPA To encourage farmers (via our member company agronomists and advisors) to maintain at least a one metre buffer zone.</p> <p>To ensure that herbicides are not sprayed right up to the bases of hedgerows. This will help to protect species diversity of rare flowers, to the benefit of higher species, which feed on them directly or the insects they support.</p> <p>UK Governments Halt losses by 2005. Achieve favourable management of 25% by 2000 and 50% by 2005. Maintain number of hedgerows and trees at current levels.</p>	<p>Hedgerow management to benefit biodiversity can be carried out at negligible cost ensuring that farmers are advised as follows:</p> <ul style="list-style-type: none"> • Herbicides are not sprayed into the base of hedges; • 3 year rotation of trimming-staggered - so not all hedges are cut in one year (road side hedges may need to be cut more often); • Trim in late winter, ideally after berries have been eaten and before bird nesting starts. <p>Regeneration can be improved by, re-establishing grass strips, alongside, coppicing and positioning fences at least 1 metre from hedge to permit bushy growth and hedge laying.</p>	<ul style="list-style-type: none"> • Agronomists will provide farmers with practical advice on reducing drift into hedgerows. • CPA manufacturers will provide EIS⁴ to ensure that product users have the best advice to hand. • CPA will provide feedback and contribute to the Hedgerow UK BAP. • Agronomists will encourage farmers to join Agri-environment schemes. 	<ul style="list-style-type: none"> • Training and advice to be provided to all CPA agronomists. V⁵ Project 11. This will address the use of Crop Protection Management Plans (CPMPs) and Environmental Information Sheets (EIS). • Representation on the UK National BAP Steering Group. • Direct advice on margin establishment and management.

³Focus on this UK wide species is also very important since in Northern Ireland and Wales breeding populations of grey partridge are no longer present.

⁴Environmental Information Sheets.

⁵Voluntary Initiative.

Action Plans

Habitat	Objectives	Management Aspects	Action	Mechanism
<p>Cereal field margins (conservation headlands, grass margins and beetle banks) <i>Associated species:</i> Grey partridge, lapwing, skylark, stone curlew⁶, corn bunting, yellow wagtail, cornflower, shepherd's needle, pheasants eye, brown hare, dormouse, harvest mouse, corncrake⁷, quail, barn owl.</p>	<p>CPA Overall, some 300 species of plants can occur in arable fields. Therefore, the CPA will work via its member company agronomists and advisors to ensure that the selective use of herbicides is maintained so that only the most economically damaging weeds are controlled and spray drift is minimised in conservation areas around fields.</p> <p>In addition, to protect foraging bees and beneficial insects that make use of these habitats, we will promote selective and low-dose use of insecticides, where possible⁸.</p> <p>UK Governments Maintain, improve and restore 15,000ha of cereal field margins in the UK by 2010⁹.</p>	<p>Management of field margins, conservation headlands and beetle banks¹⁰ to benefit biodiversity can be carried out at negligible cost ensuring that farmers are advised as follows:</p> <ul style="list-style-type: none"> ● Not applying herbicides or insecticides to the outermost edge of a cropped field, to allow annual arable weeds to develop and survive along with host insects; ● Narrow grass margins (2m) around or across arable fields, should be left unsprayed (except if persistent weeds occur); ● If left uncut these will provide nesting cover for some birds or, if they are mown, drying areas for game birds. 	<ul style="list-style-type: none"> ● Agronomists will provide farmers with practical advice on establishing field margins, product selection and avoiding spray drift. ● Members will provide EISs to ensure that product users have the best advice to hand. ● CPA will publish a 'Guidance on Best Practice for insecticides'. ● CPA will provide feedback to the Cereal Field Margin UK BAP. ● Agronomists encourage farmers to enter 'Arable Options in agri-enviro schemes'. 	<ul style="list-style-type: none"> ● Training and advice to be provided to all CPA agronomists. VI Project 11. This will address the use of CPMPs and EISs. ● Encourage spray operators to use this additional guidance. ● Representation on the UK National BAP Steering Group. ● Direct discussions with farmers, in addition to crop protection advice.

⁶Lapwing, skylark and stone curlew will most benefit from field margins placed away from boundary structures.

⁷Mostly now isolated to Scotland but after decades of absence breeding has now occurred back in Yorkshire.

⁸Insecticide 'Guidance on Best Practice for Insecticides'.

⁹This target has already been met but the CPA is committed as part of the VI to ensure that the area under management continues to increase.

¹⁰Detailed advice on the establishment of conservation headlands and beetle banks should be sought from the Game Conservancy Trust or FWAG advisors.

Action Plans

Habitat	Objectives	Management Aspects	Action	Mechanism
<p>Permanent Pasture and grass leys: <i>Associated species:</i> Grasses and flower-rich swards plus host insects and lowland birds (skylark, yellow wagtail, lapwing, stone curlew).</p> <p>Unimproved grassland is most valuable for farmland birds especially when associated with arable fields.</p>	<p>CPA Such managed grassland can have good ecological value for plants, especially ancient meadowland, which has continually been managed by grazing.</p> <p>UK Governments¹¹ Arrest the depletion of unimproved lowland hay meadow throughout the UK. Within SSSIs and ASSIs, initiate rehabilitation management for all significant stands of unimproved lowland hay meadow in unfavourable condition by 2005, with the aim of achieving favourable status wherever feasible by 2010.</p> <p>For stands at other localities, secure favourable condition over 30% of the resource by 2005, and as near to 100% as is practicable by 2015.</p> <p>Attempt to re-establish 500 ha of lowland hay meadow of wildlife value at carefully targeted sites by 2010.</p>	<p>Established grazing land (unimproved grassland) is usually species-rich, being host to a range of grasses and flower species. It is often used for hay and silage and accordingly subject to relatively light grazing pressure. Inappropriate use of fertiliser or crop protection products can adversely affect this blend by removing broadleaved plants or favouring the more vigorous species.</p> <p><i>Therefore it is important to:</i></p> <ul style="list-style-type: none"> • Only spot-treat the most persistent weeds with herbicides; • Avoid spray drifting from neighbouring fields. 	<ul style="list-style-type: none"> • Provide advice to product users to ensure that spray drift to neighbouring areas is minimised. • Encourage spot treatment of only the most competitive weeds to ensure that beneficial plant species are left for wider benefit. 	<ul style="list-style-type: none"> • Training and advice to be provided to all CPA agronomists. VI Project 11. This will address the use of CPMPs and EISs.

¹¹The targets given relate specifically to 'Lowland Meadows' rather than permanent pasture or grass leys.

Habitat	Objectives	Management Aspects	Action	Mechanism
<p>Farm watercourses, wetlands, ponds and fens <i>Associated species:</i> Blunt flowered rush, fen orchid, Grass of Parnassus, marsh helleborine, marsh fern, water vole, harvest mouse, common water and pygmy shrew, reed and sedge warbler, reed bunting, Cettis warbler, marsh harrier, snipe, blacktailed godwit, redshank, fen rafter spider, swallowtail and large copper butterfly, brown hare.</p>	<p>CPA The <i>Voluntary Initiative</i> programme includes projects aimed at reducing indirect water pollution from spray drift or the disposal of pesticides.</p> <p>UK Governments Identify and rehabilitate priority fen habitats by 2005. Ensure water quality/quantity of SSSI/ASSI fens by 2005.</p>	<p>Ditches, waterways, wetlands, ponds and fen areas provide a valuable habitat for a wide range of invertebrates, small mammals and birds. The conservation interest of these areas can be maintained at little or no cost.</p> <ul style="list-style-type: none"> • When spraying, keep well away from watercourses, use a buffer strip and prevent drift; • Prevent water run-off from hard surfaces by careful mixing and filling and the correct disposal of spray-tank washings and product containers. 	<ul style="list-style-type: none"> • CPA supports Operator spray training via continual professional development. • Promote awareness of LERAP buffer zone requirements¹². 	<ul style="list-style-type: none"> • Encourage sprayer operators to join National Register of Spray Operators¹³. • Agronomists to use EISs to help farmers with product selection and risk management. • Alert farmers to specific water catchment risks and other high risk situations.

¹²Local Environmental Risk Assessment for Pesticides.

¹³NROSO is a new register for spray operators as part of the VI.

Action Plans

Habitat	Objectives	Management Aspects	Action	Mechanism
<p>Non-agricultural land areas-gardens and amenity areas <i>Associated species:</i> Garden birds, small mammals, butterflies, insects, frogs, newts and squirrels.</p> <p>Wildlife in parks and gardens traditionally adapted to live alongside people.</p>	<p>CPA To encourage all amenity and home garden users to be aware of the best practice use of products.</p>	<p>A mixture of formal lawns, low lying scrubs, trees, hedges, rough weedy patches and ponds will help to enhance wildlife as well as public interest. If pests and weeds do need to be controlled:</p> <ul style="list-style-type: none"> ● Identify pests and weeds and use only the specified dose; ● Spray insecticides later in the day, when fewer beneficial insects are active and flowers are closed; ● Avoid using insecticides around any ponds or other areas where insects congregate; ● Slug pellets and rodent control must be used only when needed and as stated on the label. 	<ul style="list-style-type: none"> ● CPA member companies will provide environmental information and technical support to ensure that product users have the best advice to hand. 	<ul style="list-style-type: none"> ● Continual 'in-house' product training and advice is provided to all technical advisors. ● Development of Integrated Amenity Management (IAM) guidance.

Species	Objectives	Management Aspects	Action	Mechanism
<p>Grey Partridge <i>Associated habitat:</i> mixed farmland, ancient species-rich hedgerows, and cereal field margins.</p> <p>The grey partridge is no longer the prolific game bird it once was. It no longer occurs in Northern Ireland and in most other areas of the UK it is now either absent or uncommon.</p>	<p>CPA Support and help to broadcast advice given by The Game Conservancy Trust and other wildlife groups via our agronomists.</p> <p>UK Governments¹⁴ Halt decline by 2005. Ensure the population is increasing and in excess of 150,000 pairs by 2010. Maintain and enhance current range.</p>	<p>The establishment of field margins, conservation headlands, beetle banks and good maintenance of hedges improves the nesting success of this bird.</p> <p>For chick survival, abundant insect food is crucial:</p> <ul style="list-style-type: none"> ● Apply grass weed herbicide only and no insecticides after 15th March¹⁵ on conservation headlands; ● Use selective autumn herbicides and grass weed killers to combat cleavers, black grass and other noxious weeds; ● Fungicides can be applied as normal; ● On heavy land nitrogen levels are best reduced; ● Plant set-aside strips with cereal mixtures next to nesting cover; ● Leave some bare soil between the hedge bank and the crops, to prevent weed infestation and to provide a drying-out area for the chicks. 	<ul style="list-style-type: none"> ● Provide advice to product users to ensure that spray drift into conservation headlands or set - aside is minimised. ● Encourage spot-treatment of only the most competitive weeds to ensure that beneficial plant species are left for wider benefit, within field margins. 	<ul style="list-style-type: none"> ● Training and advice to be provided to all CPA agronomists. VI Project 11. This will address the use of CPMPs and EISs and highlight the needs of this species. ● In addition, CPA members are actively involved in research with the Game Conservancy to help this species.

¹⁴Detailed advice on the management requirements can be obtained from The Game Conservancy Trust, who is the lead partner within the UK BAP process.

¹⁵Summer insecticides should not be applied to cereal crops due to the lasting impact (several years) of large-scale application. If there is no other choice, use a selective product such as pirimicarb, or leave the outer 12 metres unsprayed.

Action Plans

Species	Objectives	Management Aspects	Action	Mechanism
<p>Corn bunting Associated habitat: arable farmland, less intensively managed farmland, ancient species-rich hedgerows, cereal field margins.</p> <p>The corn bunting is one of the few British species largely dependent on cropped land. It is a declining species with around 20,000 territories remaining in Britain with no confirmed breeding in Wales or Northern Ireland. The bulk of the population is found across southern and eastern England but with small outlying groups in Cornwall, the Outer Hebrides and north-east Scotland.</p>	<p>CPA Support and help to broadcast advice given by the Royal Society for the Protection of Birds and English Nature who are the lead partners for this species within the UK BAP process, via our agronomists.</p> <p>UK Governments <u>Short term</u> Halt or reverse the decline in numbers by the year 2003 so that the Breeding Bird Survey is at least at 1996 levels.</p> <p><u>Long term</u> 1) Sustained recovery of numbers so that the BSS index is at least 50% higher than 1996 levels by 2008. 2) Expand the range from that of 1996 by 2008.</p>	<p>The establishment of field margins, conservation headlands, beetle banks and good maintenance of hedges improves the nesting success of this bird. So does the effective management of set aside.</p> <p>For chick survival, abundant insect food is crucial:</p> <ul style="list-style-type: none"> ● Apply grass weed herbicide only and no insecticides after 15th March¹⁶ on conservation headlands; ● Use selective autumn herbicides and grass weed killers to combat cleavers, black grass and other noxious weeds; ● Fungicides can be applied as normal; ● On heavy land nitrogen levels are best reduced; ● Plant set-aside strips with cereal and wildflower mixtures. 	<ul style="list-style-type: none"> ● Provide advice to product users to ensure that spray drift into conservation headlands or set-aside is minimised. ● Encourage spot-treatment of only the most competitive weeds to ensure that beneficial plant species are left for wider benefit within field margins. 	<ul style="list-style-type: none"> ● Training and advice to be provided to all CPA agronomists. VI Project 11. This will address the use of CPMPs and EISs and highlight the needs of this species.

¹⁶Summer insecticides should not be applied to cereal crops due to the lasting impact (several years) of large-scale application. If there is no other choice, use a selective product such as pirimicarb, or leave the outer 12 metres unsprayed.

Some Key Biodiversity Projects

In this section we outline some of the biodiversity projects which are currently being supported by the crop protection industry.

SAFFIE - Sustainable Arable Farming For an Improved Environment

PROJECT OBJECTIVE:

To enhance farmland biodiversity by integrating novel habitat management approaches in both the crop and the non-cropped margins and thus to develop more sustainable farming.

SUPPORTED BY:

This project is sponsored by DEFRA, SEERAD and English Nature through the Sustainable Arable LINK programme. The industrial funders are British Potato Council, CPA, Home Grown Cereals Authority, Royal Society for the Protection of Birds, Safeway Stores plc, Sainsbury's Supermarkets Ltd, Syngenta and the National Trust.

PROJECT DESCRIPTION:

The huge strength of this £3.5 million research effort lies in its focus on finding practical solutions that real farmers will be able to adopt.

There are essentially three separate experiments within the five-year SAFFIE programme.

The first will run for years 1 and 2 and is already underway. It aims to manipulate cereal architecture within a conventional winter cereal rotation to increase invertebrate and weed seed abundance, biomass and availability to benefit ground-nesting birds. It is looking at the effect of wide-spaced rows and undrilled patches versus conventional crops. But this is no small plot trial.

The plot sizes are 5ha and there are ten sites. There is also a smaller-scale targeted experiment looking at increasing key plant species - those of importance to insects - within the crop.

The second experiment is manipulating the vegetation structure within the field margin to maximise invertebrates and non-crop plants for boundary nesting and foraging species. This includes comparisons between:-

- (1) grass within Countryside Stewardship.
- (2) tussock grasses and broadleaved plants.
- (3) fine grass and broad-leaved plants.

Three sites with different soil types are being used with minimum plot sizes of 5m x 30m.

Experiment three is the really exciting part. It brings the first two experiments together to identify the combination effects of these different approaches on large-scale sites. It will assess the integrated effect of best crop and margin practices on breeding birds and other species. Whilst also including a cost-benefit analysis of these management practices to determine the optimal strategies to benefit farmland biodiversity.

SCOPE OF INDUSTRY INVOLVEMENT:

Significant cash and in-kind support includes co-ordinating the location of suitable trial sites and a major role in communicating the key messages to farmers and their advisors.

Some Key Biodiversity Projects

The BUZZ project

PROJECT OBJECTIVE:

To provide a network of six sites to demonstrate practical and effective techniques to manage farmland in ways which enhance biodiversity and maintain farm profitability.

SUPPORTED BY:

Syngenta Crop Protection UK Ltd, Unilever Research and Development and Birds Eye Walls and managed by The Farmed Environment Company (FEC) in association with The Centre for Ecology and Hydrology.

PROJECT DESCRIPTION:

This three-year research project is essentially assessing different types of field margins and comparing these to a conventionally farmed field to work out which options are best for which species and under which situations. At the same time it is taking full account of any economic effects on the farmer. The results will help farmers decide what habitats they should be looking to establish and how best to achieve their selected options. It is building on experience gained over the last four years at Manor Farm near Malton in North Yorkshire where FEC has created pollen-rich wildflower margins and other targeted habitats. These are already attracting 23 different species of butterfly and the populations of barn owl, skylark and tree sparrow have all increased significantly.

SCOPE OF INDUSTRY INVOLVEMENT:

Syngenta is helping to fund this £300,000 project and has provided one of the six trials sites for the work.

Focus on Farming Practice

PROJECT OBJECTIVE:

To balance the demands of the consumer for high quality produce with the needs of the farmer to make a profit and the desire of both to protect the environment.

SUPPORTED BY:

Agrovista UK Ltd, Farmcare (part of the CWS Group) and Hydro Agri UK Ltd.

PROJECT DESCRIPTION:

This long running project was established in 1993 on a 60ha site on the Farmcare Stoughton Estate near Leicester. The site comprises seven fields, each of which has been divided into two with one half farmed according to Estate practice and the other following integrated farming principles. The project is part of the Integrated Arable Crop Production Alliance. Among the more recent biodiversity aspects has been participation in the 3D Farming project which is looking at the role of field margins in supporting beneficial insects such as hoverflies and parasitic wasps. The project has provided useful data on the beneficial effects of non-inversion tillage on earthworm populations and in providing food for over-wintering birds. A project looking at cutting regimes for hedgerows concluded that diversity of hedgerow management is the key to biodiversity.

SCOPE OF INDUSTRY INVOLVEMENT:

The three partners have shared the running costs of this project and each has contributed in-kind support. In the case of Agrovista this has primarily been technical and agronomic advice on crop protection matters with the Focus project benefiting from company's extensive field-trials database.

Some Key Biodiversity Projects

Managing manufacturing sites for wildlife

PROJECT OBJECTIVE:

To develop a thriving 'Nature reserve' around the company's West Yorkshire manufacturing plant.

SUPPORTED BY:

A H Marks & Company Ltd.

(members of the Yorkshire Wildlife Trust)

PROJECT DESCRIPTION:

In 1996 the company set about transforming an area of some 2000 square metres behind its production plant in Wyke, near Bradford. A pond was excavated and a planting scheme of native shrubs and trees begun. In 1998, the structural work was completed then the area largely left to wildlife. In 2000, as members of the Yorkshire Wildlife Trust, the company invited the Trust to conduct a survey of the site. The site had become rather overgrown in some places but was generally providing some reasonable habitat. Among the successes, has been an increase in the numbers and variety of water birds using the site although many seem to enjoy the emergency water pond at the front of the plant just as much as the nature reserve at the back.

Other initiatives include the setting up of several nesting boxes around the site, one of which hosted a pair of breeding kestrels for one season. Foxes have also been bred at the site.

SCOPE OF INDUSTRY INVOLVEMENT:

The project involved a small investment in the early years for the pond construction and structural planting of around £16,000.

Contributing to local wildlife awareness

PROJECT OBJECTIVE:

To observe and promote wildlife at or nearby to BASF plc's sites across the UK.

SUPPORTED BY:

BASF plc

PROJECT DESCRIPTION:

Articles detailing the birds and mammals seen at these sites are produced for the 'in-house' magazine.

SCOPE OF INDUSTRY INVOLVEMENT:

Waterfowl and breeding foxes have been observed at the BASF plc Gosport Agricultural Research Unit, situated on the edge of Fareham Creek a Special Site of Scientific Interest.

At Seal Sands chemical manufacturing site, BASF sponsors English Nature and the local Teesmouth Wildlife Trust, to help the breeding colony of seals that use the Tees Estuary and Seal Sands.

Some Key Biodiversity Projects

BTO Birds and Business Alliance – BTO-Hanson Business Bird Challenge

PROJECT OBJECTIVE:

To encourage firms to promote biodiversity on business and industrial sites by introducing, maintaining and managing conservation features on their sites.

SUPPORTED BY:

Syngenta Crop Protection UK Ltd.

PROJECT DESCRIPTION:

The Challenge is organised by the British Trust for Ornithology and takes place every two years. Hanson is sponsoring this year's event. Businesses are asked to submit sites and then conduct surveys on a monthly basis to keep track of the numbers and species of birds using the site. Local BTO members and birdwatchers provide the expertise. Information is also collected on the numbers and types of breeding birds on the site. As well as prizes for the sites at which the largest number of species are spotted during the year, there are also awards to recognise conservation improvements and community initiatives. By taking part in the Challenge, businesses are also helping to fund the conservation work of the British Trust for Ornithology.

SCOPE OF INDUSTRY INVOLVEMENT:

Syngenta Crop Protection UK Ltd has entered three sites. These are at Yalding in Kent, Jealotts Hill in Berkshire and Whittlesford in Cambridgeshire.

Specific weed management

PROJECT OBJECTIVE:

To explore the benefits of using new crop protection technology to control specific problem weeds in game-cover crops in Scotland.

SUPPORTED BY:

The Game Conservancy and **Monsanto Agriculture**

PROJECT DESCRIPTION:

Following the introduction of a new grassweed herbicide, Monitor, in 2001, the Game Conservancy approached Monsanto to set up a trial to test the effectiveness of the new product in dealing with heavy infestations of couch grass in triticale crops sown as wildlife-cover crops. The removal of such weeds is crucial to provide a triticale crop that stands into the winter and allows free movement of ground-living birds, hares and other wildlife. To achieve this triticale is sown much more thinly than an agricultural crop and this provides a greater chance for weeds to flourish. Monitor has proved extremely effective since it controls the problem grass weeds such as couch and sterile brome and is also effective against cleavers. However many species which provide chick food are poorly controlled including knotgrass, fat-hen, the speedwells, pansies and poppies. Taking out the competitive weeds also allows these plants to flourish.

SCOPE OF INDUSTRY INVOLVEMENT:

Provision of free-of-charge product and advice to the trial.

Some Key Biodiversity Projects

Bio-security projects

PROJECT OBJECTIVE:

To remove invasive alien weed species which are threatening our native wild plants.

SUPPORTED BY:

Monsanto Agriculture

PROJECT DESCRIPTIONS:

Monsanto Agriculture is involved in a range of projects working with NGOs and local groups to cope with invasive species such as Rhododendron, Japanese Knotweed, Giant Hogweed and Cordgrass (*Spartina*).

These include:

Giant Hogweed eradication and education programmes in co-operation with the Tweed Forum in the Tweed catchment in the Scottish Borders and with local landowners/farmers along the banks of the river Whittinghame and Deal Burn in East Lothian.

Japanese Knotweed eradication programmes in association with Crieff Angling Association on the river Earn in Perthshire and the Cornwall Japanese Knotweed Forum where the work has included different application techniques and approval applications.

Re-establishment of native habitat through eradication of Rhododendron in Killarney National Park, Ireland, Lewis Castle Estate, Stornoway, Isle of Lewis and Islay Estates, Isle of Islay.

Working with the Yorkshire Wildlife Trust to re-establish and maintain open mudflats to provide a migration feeding stopover for passage wading birds by removing reed sweet-grass (*Glyceria maxima*) at Denaby Ings Nature Reserve, South Yorkshire.

Eradication of invasive introduced *Spartina* from mudflats in the Lindisfarne National Nature Reserve in conjunction English Nature along with similar projects in the Dee Estuary with RSPB, the Solway Firth Wildfowl & Wetlands Trust, in Grange-over-Sands with Cumbria County Council and the Dyfi National Nature Reserve Wales.

SCOPE OF INDUSTRY INVOLVEMENT

Experimental design, field activities, assessment and analysis; production application; regulatory support for experimental approval applications.

Some Key Biodiversity Projects

SAPPIO LINK – 3D Farming Project: Making Biodiversity Work for the Farmer

PROJECT OBJECTIVE:

To provide farmers with advice on field-margin management to optimise integrated pest management whilst maintaining biodiversity benefits and profitability.

To test and further develop a novel strategy for aphid control involving the manipulation of parasitoids using aphid sex pheromones in field margins.

To develop and evaluate the use of specific native flowering plants in field margins to enhance the abundance and biodiversity.

To measure the effects of different field management options on biodiversity of aphids and their natural enemies in these non crop habitats.

SUPPORTED BY:

Dow AgroScience Ltd, Rothamsted, Game Conservancy, PGRO, DEFRA, SAC, HGCA, Unilever, Tesco and HDE.

PROJECT DESCRIPTION:

To provide farmers with advice on field margin management to optimise integrated pest management whilst maintaining biodiversity benefits and profitability.

SCOPE OF INDUSTRY INVOLVEMENT:

Funding, project management, communications of benefits to farmers.

Specific Arable Plant Manipulation in Winter Wheat

PROJECT OBJECTIVE:

To improve winter cereal habitats for over-wintering/ nesting farmland birds in conjunction with the Allerton Research and Educational Trust (on behalf of the Game Conservancy Trust).

SUPPORTED BY:

Bayer CropScience UK Ltd.

PROJECT DESCRIPTION:

To manage yield robbing weeds whilst maintain sufficient arable plant diversity to encourage farmland birds.

SCOPE OF INDUSTRY INVOLVEMENT:

Funding, project management, communications of benefits to farmers.



Within the UK's BAP 1994 report (the UKBAP) there is a list of broad nature conservation targets for the next 20 years - namely the '59 Steps' towards biodiversity. The CPA supports Governments and other UK organisations in their endeavours to fulfil the following relevant elements of the UK BAP:

Step 18

Continue to support further 'greening' of the CAP while recognising the need to work within the framework of the reformed CAP, press for closer linkage between agricultural and environmental policies and objectives.

Step 19

Continue to monitor existing financial incentives to encourage environmentally sensitive forms of agriculture to ensure they are having positive effects on the habitats and landscapes targeted and are thus contributing to biodiversity objectives. Tailor new incentive schemes planned under the agri-environmental programme to complement existing schemes and keep under review.

Step 20

Enforce strict regulations controlling the use and storage of environmentally damaging pesticides and fertilisers if necessary introducing new measures.

Step 22

Expand government research on environmental management and continue support and advice to farmers to help them identify and adopt environmentally beneficial management practices, which will conserve and, where practicable, enhance wildlife habitats on their land.

Step 23

Continue to support measures for hedgerow management and restoration in England and Wales.

Step 33

Prepare plans for threatened species in priority order: globally threatened; threatened endemics; other threatened species listed in relevant schedules and annexes to UK and EU legislation and international agreements to which the UK is a party; endangered and vulnerable species listed in Red Data Books, aiming to complete and put into implementation plans for at least 90% of the present known globally threatened endemic species within the next ten years.

Step 42

Continue to give legal protection to threatened species, and prohibit both the persecution of protected species and the use of illegal means of killing/taking.

Step 45

Consider a publicity strategy to explain the meaning and importance of biodiversity and explain what needs to be done to conserve and enhance it. The campaign could: support initiatives that enhance people's understanding of what is special about their local environment; encourage the creation of a network of community wardens; support initiatives that promote local action to conserve local biodiversity.

Step 46

Incorporate environmental principles, including biodiversity, in their policies and programmes.

Step 51

Participate actively at all levels of biodiversity concern.

In particular, as a responsible industry, we see steps 45, 46 and 51 key to raising public awareness of biodiversity and contributing at all levels of biodiversity concern.

Consequently we are very much focusing our efforts within the *Voluntary Initiative* on helping to achieve these.



Implementation and Review

In order to implement the measures specified in this Biodiversity Strategy and Action Plan, the CPA will endeavour to fulfil the following:-

- **Seek partnerships with other organisations involved in farming and wildlife in line with the work ongoing with SAFFIE project;**
- **Work with our network of agronomists and other advisors within England, Northern Ireland, Wales and Scotland to influence farmers and raise awareness of biodiversity;**
- **Review progress of our member companies against the key measurables in April 2003 to give our member companies feedback on the key areas which they need to focus upon;**
- **Progress achieved against implementing all the measures and providing the advice in this plan will then be audited in April 2004. An update to this plan will be produced to highlight achievements made.**

Appendix 1

Crop Protection Association Member Companies

Manufacturer Companies

Agrichem (International) Ltd.
BASF Plc
Bayer CropScience Plc
Certis Europe BV
Doff Portland Ltd.
Dow AgroSciences Ltd.
Du Pont (UK) Ltd.
Fine Agrochemicals Ltd.
FMC Chemicals Limited
Headland Agrochemicals Ltd.
ISK Biosciences Europe SA
Joseph Metcalfe Ltd.
Luxan (UK) Ltd.
Makhteshim-Agan (UK) Ltd.
Mandops (UK) Ltd.
A H Marks & Company Ltd.
Monsanto UK Ltd.
Nomix-Chipman Ltd.
Nufarm UK Ltd.
pbi Home & Garden Ltd.
SumiAgro (UK) Limited
Syngenta Crop Protection UK Ltd.
The Scotts Co (UK) Ltd.
Uniroyal Chemical Europe BV
United Phosphorus Ltd.
Universal Crop Protection Ltd.
Vitax Ltd.

Distributor Associate Members

Agrovista UK Ltd.
Banks Cargill Agriculture Ltd.
Brown Butlin Group Ltd.
Cropwise Limited
Dalgety Arable Ltd.
Fargro Ltd.
H L Hutchinson Ltd.
Masstock Arable (UK) Ltd.
ProCam Group Ltd.
Sands Agricultural Services Ltd.
Technicrop Ltd.

Appendix 2 - EXAMPLE ONLY

Environmental Information Sheet [PRODUCT] MAFF/MAPP number [XXXXX]	
A 250g/litre EC formulation containing [active substance], a [chemical class] fungicide for the control of a range of diseases in [main crop group(s)]. Max individual dose 1litre/ha(250g a.s/ha) Max total dose 2litres/ha (500g a.s/ha)	
SECTION	PROFILE
1. WILDLIFE Mammals and Birds	<p>[Product] is not classified as "<i>Harmful to game and wildlife</i>".</p> <p>No risk management necessary required to protect wild mammals and birds. [Active substance], the active ingredient in [Product], is of low toxicity to mammalian and bird species. The risk to wild mammals and birds grazing on treated areas is low, as is the risk due to exposure from other routes, e.g. consumption of earthworms or other invertebrates such as insects.</p>
2. BEES	No risk management is necessary. [Product] is of low risk to honeybees.
3. NON TARGET INSECTS & OTHER ARTHROPODS	No risk management is necessary. [Product] poses a low risk to a range of arthropod species commonly found in and around treated fields, e.g. ground beetles, ladybirds, spiders and aphid parasitoids.
4. AQUATIC LIFE	<p>[Product] is "<i>Dangerous to fish or other aquatic life</i>".</p> <p>[Product] is highly toxic to aquatic invertebrates, fish and algae and is of moderate toxicity to the aquatic plant <i>Lemna</i>. Care must be taken to ensure that surface waters or ditches are not contaminated with the product or the used container.</p> <p>Risk management is essential. [Product] can be used safely providing care is taken to prevent spray drift reaching surface waters. The following risk management practices must be carried out in order to ensure that there is adequate protection for aquatic species. "<i>Do not allow direct spray from ground crop sprayers to fall within 5m of the top of the bank of a static or flowing waterbody, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1m of the top of a ditch which is dry at the time of application. Direct spray away from water.</i>"</p> <p>LERAP Category B. Buffer zones may be reduced (see LERAP Guidelines).</p>
5. SOIL and GROUNDWATER Earthworms Soil micro-organisms	<p>[Active substance] is persistent (degrades slowly) in soil. [Active substance] is adsorbed to soil and is therefore of low mobility. It has been shown to remain in the top 5 cms of soil and consequently there is a low risk of groundwater contamination. No risk management necessary.</p> <p>No risk management necessary. [Product] is of low toxicity to earthworms. Field studies have also demonstrated that [Product] is unlikely to have any adverse effect on earthworm populations in the long-term.</p> <p>No risk management necessary. At the recommended application rate, [Product] has negligible effects on soil microbial respiration, on nitrogen turnover and on straw decomposition. The risk to soil microbial activity is therefore low.</p>
6. NON-TARGET PLANTS	[Product] may cause damage to broad-leaved plant species. Avoid spray drift on to neighbouring crops. Care should be taken to minimise the drift of [Product] into conservation headlands, beetle banks and field boundaries such as hedgerows, which may provide an important habitat for wild flowers.

ALWAYS READ THE LABEL: USE PESTICIDES SAFELY

Care must be taken to minimise the risk of surface water contamination from farmyard and field sources.

For further information about the environmental profile of this product contact:-

This Environmental Information Sheet was prepared in accordance with CPA Guidance Notes Version [number].

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EIS Version [number]

[date of preparation of EIS]

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