

Arable land

WHAT IS ARABLE LAND?

Arable is any land, which has been tilled or ploughed to grow a crop, whether it is for human or animal consumption or for other purposes. The main arable crops in Britain are wheat, barley, oilseed rape, linseed, potatoes, fodder beet and maize. Areas of vegetables and soft fruit are also included in this Plan if grown commercially. Cereals account for 51% of the total area of arable land in Great Britain.

There are a number of rare arable flowers in Britain, which are dependent on the management of land for cereal production of which pheasant's-eye, cornflower, shepherd's-needle and narrow-fruited cornsalad are some of the most threatened.

Over two thousand species of invertebrates have been reported as occurring in cereal fields. The combination of insects and seeds has meant that cereal fields have provided a productive home for a variety of birds including grey partridge, linnet, tree sparrow, corn bunting, skylark and lapwing. The presence of hedges as boundaries in many arable fields provides valuable cover and nesting areas as well as alternative food supplies.

Brown hares are strongly associated with the distribution of arable land. A number of other mammals also use arable land including badgers, mice and voles.

WHERE IS IT FOUND IN THE UK?

Arable crops can be found across the UK, on fertile soil and relatively flat land, although the majority of this type of land is in the east.

WHY IS ARABLE LAND OF CONSERVATION IMPORTANCE?

Arable land in Britain has been in existence for over two thousand years, with many species of plants and animals having developed to exploit this habitat. The drive to increase yields and reduce waste, during the latter half of the twentieth century, has led to the intensification of management. This has threatened the survival of a number of species but changes in management could reverse this trend. Cereal field margins are a UK Biodiversity Action Plan priority habitat.

Arable wild flowers have suffered severe national declines in both their distribution and abundance, as a result of increased herbicide use. For instance, across the UK cornflower has decreased by 98% in 40 years with only three self-sustaining populations remaining nationally.

Tree sparrows, linnets, corn buntings, grey partridge and skylark have all undergone a decline of more than 50% in population levels in the last 25 years. Lapwings have undergone more than 25% decrease in population levels in the last 25 years. The use of herbicides has reduced the number of seeds available, whilst the use of insecticides has reduced both the number and diversity of insects.

There is limited data available on the history of brown hare populations but they do appear to have undergone substantial declines in the last 100 years with particularly severe declines occurring since the 1960s.

ARABLE LAND IN THE DURHAM AREA

WHAT IS THE STATE OF ARABLE LAND IN THE DURHAM AREA?

Arable land is not thought to be increasing as a percentage of land cover.

WHERE DOES IT OCCUR IN THE DURHAM AREA ?

The main arable areas in Durham are in the centre and east of the area.

THE BIODIVERSITY OF ARABLE LAND IS AT RISK FROM:

Substantial applications of nitrogen and the widespread use of insecticides and herbicides.

Removal of hedgerows and small patches of semi-natural habitat – the use of large machinery results in the development of large fields with the removal of hedgerows and a reduction in marginal habitats.

Change from spring to autumn sown cereal, which removes feeding opportunities on winter stubble and loss of suitable habitat for ground nesting birds in the spring.

Inappropriate husbandry practices such as spraying out hedge bases or ploughing close to hedge bases.

Simplification of crop rotation cycle including a decline in the use of root crops in stock rearing areas, early use of weed killers and rapid re-seeding of grassland in rotation cycles.

The loss of low intensity arable cultivation from areas where it was traditionally practiced.

Increased drainage.

Uses of cash crops to maximise subsidies e.g. hemp and flax.

THE BIODIVERSITY OF ARABLE LAND BENEFITS FROM:

Arable field margins being managed to provide refuges for plants, insects and birds (including game-birds).

Use of beetle banks to provide refuges for insects and small mammals.

Field margins managed in conjunction with conservation headlands.

Leaving stubble over winter as feeding sites for birds or a return to the growing of spring cereals.

Use of grass ley or "set aside" as an integral part of crop rotation.

Appropriate management of hedgerows including, where possible, the use of smaller fields and the planting of more hedgerows.

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IMPORTANT SPECIES FOR ARABLE LAND:

<i>Poppy</i>		<i>Skylark</i>	**
<i>Corn bunting</i>	**	<i>Lapwing</i>	*
<i>Tree sparrow</i>	*	<i>Linnet</i>	*
<i>Brown hare</i>	**	<i>Grey partridge</i>	**

OTHER HABITAT ACTION PLANS COVERING ISSUES RELEVANT TO ARABLE LAND:

<i>Hedgerows</i>	**
<i>Improved grassland</i>	*

N.B. ** indicates action plan produced in 1998.
* indicates action plan produced in 2000.

TARGETS FOR THE CONSERVATION OF THE BIODIVERSITY OF ARABLE LAND IN THE DURHAM AREA:

	DATE
Target 1 Enhance the existing biodiversity interest of arable land—with an aspiration to increase the total area of cereal margins in the Plan area and by 10% by _____ and by 30% by _____	ONGOING 2004 2008
Target 2 Decrease the amount of intensively managed arable land in the Durham area—target three study farms as examples of how this might be achieved by - 2005.	ONGOING 2005
Target 3 Convert 0.5% of existing arable land to more biodiversity valuable semi-natural habitats.	2005

ARABLE LAND ACTIONS

ACTION	DATE	POSSIBLE PARTNERS	MEETS TARGET NO.
<u>POLICY AND LEGISLATION</u>			
1. Seek opportunities to extend arable element of Countryside Stewardship scheme in Durham.	2002	MAFF, EN, RSPB, FWAG	1, 2, 3
2. Seek opportunities to extend the organic aid scheme.	2004	MAFF, EN, RSPB, FWAG	1, 2, 3
<u>SITE SAFEGUARD AND MANAGEMENT</u>			
3. Identify demonstration sites as examples of best practice e.g. LEAF farms.	2004	DBAP, FWAG	1, 2
4. Seek opportunities to increase uptake of Countryside Stewardship and Organic Aid Scheme.	ONGOING	DBAP, FWAG	1, 2
5. Ensure “cash crops” do not damage important semi-natural habitats.	ONGOING	MAFF, FWAG, DWT	1
<u>RESEARCH AND MONITORING</u>			
6. Assess current biodiversity value of arable land.	2004	DBAP, EN, RSPB, FWAG	1
7. Instigate 3-year monitoring programme for indicator species.	2004	DBAP, EN, RSPB	1
<u>ADVISORY</u>			
8. Set up Agricultural & Biodiversity Advisory Group.	2000	FWAG, DBAP, NFU, CLA, ABAG	1, 2
9. Produce guidance notes on best practice.	2004	DBAP, FWAG, RSPB, DWT, CDHP	1, 2
10. Set up small-scale grants scheme to encourage farm biodiversity project.	2004	FWAG, DBAP, LAs, CDHP, AGAB	2, 3
<u>COMMUNICATION AND PUBLICITY</u>			
11. Raise awareness of importance of arable areas for biodiversity.	ONGOING	DBAP, FWAG, CDHP, CA	1
12. Promote uptake of organic produce via supermarkets, farmers markets etc.	ONGOING	NFU, LA21	1