

Information note – Farmland birds index

How the farmland birds PSA target was formulated

- 1.1. Reversing the decline in farmland birds is viewed as a proxy for conserving wildlife in the so-called *wider* countryside, i.e. the vast bulk of the countryside that lies outside of designated nature conservation sites (Sites of Special Scientific Interest (SSSIs) and nature reserves), thereby complementing the other biodiversity PSA on SSSI condition.
- 1.2. Birds were chosen for several reasons:
- there is unparalleled information on annual changes in the populations of common birds;
 - birds act as good indicators of the general quality of the farmed environment;
 - the popularity of birds with farmers, the general public and the media means that they can be used as ‘flagships’ to draw attention to society’s need for a well-managed countryside that is farmed in a sustainable way and is rich in wildlife;
 - 13 of the 26 priority bird species identified in the UK Biodiversity Action Plan are associated with farmland - all these species are the subject of individual Species Action Plans (published in 1995 and 1998) which seek to recover their populations through appropriate management of the farmed environment.
- 1.3. A wide range of stakeholders including ornithological experts from the British Trust for Ornithology (BTO), RSPB, Game & Wildlife Conservation Trust were consulted.
- 1.4. The group of birds used for the PSA target was chosen by the BTO some years before the PSA target was formulated.
- The lists of species included in the farmland bird index were derived from an analysis by the BTO of bird species change by habitat within the new atlas of breeding birds in Britain and Ireland: 1988-1991 (Gibbons et al. 1993).
 - This analysis identified 28 species as ‘farmland birds’, defined as ‘species feeding in open farmland during the breeding season, even though they may nest in woods or hedges’.
 - However, six species were excluded from the farmland birds index because they were considered too rare or localised to be suitable for a UK-wide (or England-wide) index (hobby, quail, Montagu’s harrier, Corncrake, stone curlew and ciril bunting) and two were excluded because they are introduced, non-native, species (red-legged partridge and pheasant).
 - Subsequently, the barn owl was also dropped from the index because of a lack of annual data with which to update the index. BTO have since been investigating whether Barn Owl data can be incorporated into the index.
 - As a consequence, the farmland birds index comprises 19 species of common and widespread birds closely associated with farmland habitats. The 19 species are:
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|----------------|--------------|----------------|
| Kestrel | Corn bunting | Linnet |
| Rook | Tree sparrow | Yellow wagtail |
| Grey partridge | Turtle dove | Whitethroat |
| Goldfinch | Jackdaw | Reed Bunting |
| Skylark | Yellowhammer | Lapwing |
| Woodpigeon | Starling | Stock dove |
| Greenfinch | | |

Reasons for farmland bird declines

- 2.1 Farmland bird populations declined by around 50% between the mid-1970s and the mid-1990s. Research, much of it Government funded, has identified that agricultural intensification led to these declines. The key aspects of intensification leading to these declines include:
- the loss of mixed farming;
 - the switch from spring to autumn sowing of cereal crops (and consequent loss of overwinter stubble fields);
 - increased use of agro-chemicals;
 - agricultural improvement of grasslands; and
 - the loss of field margins and hedges.
- 2.2 The farmland bird index had appeared to stabilise for a number of recent years (albeit at very low levels) however the latest data shows a 3% decline between 2006 and 2007. There are a number of environmental factors that influence the Farmland Bird Index and could have contributed to the recent decline.
- A key factor however is considered to be the area of suitable habitat such as the area of uncropped and other fallow land.
 - Disease has also been an important influence for some species, such as greenfinch, where there has been a particularly sharp fall (-15%).
 - Further work is underway to investigate the reasons for the changes in the population levels of individual species.
 - The decline in recent years of the index pre-dates the reduction of the set-aside rate to 0% in 2007. It is expected that the loss of set-aside and other uncropped land may have a further impact.
- 2.3 Predation is often quoted as a reason for the decline in farmland bird numbers but research on this subject has shown:
- Although predation is the main reason for egg and chick losses in many bird species, most species can withstand high levels of predation.
 - In most mainland situations, there is little evidence to suggest that predator removal has any long lasting benefit. Successful removal often requires complete and permanent elimination of predators. This has been corroborated by recent RSPB work which showed that predator control is rarely effective in increasing bird populations.
 - For magpies and songbirds, there is no evidence that magpies have an adverse effect on songbird populations at any level, although local predation may be high.
- 2.4 The key focus of the farmland bird PSA target is to deliver habitat for farmland birds (and other farmland wildlife) of a suitable quality and quantity to influence increases in their populations.

Impact of agri-environment schemes.

- 3.1. There are many reasons why the decline in farmland birds has not been reversed over the last decade, despite increasing areas of land in environmental management:
- Birds will take time to respond to measures provided by Environmental Stewardship, which was only introduced in 2005 (time lag effect).
 - Current Environmental Stewardship options may not be as effective as intended to meet all bird feeding and nesting needs.

- Uptake of key Environmental Stewardship options (especially in-field arable options) has been low and their distribution across the wider arable landscape has been limited.
- Targeting and advice measures underpinning Environmental Stewardship have not been as effective as we would have wished.

3.2. Where appropriate measures have been put in place through Environmental Stewardship, farmland bird populations have responded positively. An example of this is at the RSPB's Hope Farm in Cambridgeshire where farmland bird numbers have doubled since 2000, mainly due to land management undertaken through Entry Level Stewardship (ELS). This indicates that improved use of existing measures through scheme targeting, advice, and correct location of scheme options, can deliver a recovery for farmland birds.

3.3. A targeted approach using agri-environment scheme options has been very successful with some farmland bird species - in Devon, the curlew population has increased by 600% since 1989 and stone curlew have increased significantly in the South West and Eastern areas of England.