Research is key if we are to reverse the trends

Our history of scientific research has helped to shape the landscape for birds, both past and present. This work, and the data collected by over 40,000 volunteers, help to inform the public, opinion-formers and environmental policy-makers. Our long-term datasets, some having run for more than 50 years, combined with our scientific expertise and volunteers from all over the country, gives BTO a unique, impartial and knowledgeable voice in ornithology and nature conservation. It was BTO research that first confirmed the declines in farmland birds, through our extensive monitoring of wild bird populations, and we have over 20 years' experience of working on the causes of decline and possible solutions. BTO research has been central in the development of agri-environment schemes, which have slowed the downward trends in some farmland bird numbers but not yet reversed them.

How can I help?

Agri-environment schemes have succeeded in reducing the rate of decline of a range of farmland bird species, but real population recoveries remain elusive and Skylark, for example, remains in trouble. It is clear from our latest results that there is still much we do not understand about how to reverse farmland bird declines. While government funds still support scheme monitoring, money for research and development is increasingly scarce. Your help and support will enable the next generation of research that will inform how we can integrate farmland bird conservation with productive agriculture.

Help us to improve the fortunes of farmland birds
Make a donation at www.bto.org/farmland-bird-appeal

www.bto.org
British Trust for Ornithology, The Nunnery, Thetford, IP24 2PU, 01842 750050
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"Many of us thought we had solved the farmland bird decline problem, but the latest evidence suggests more research is needed to find conservation solutions that really work."

Dr Gavin Siriwardena
Head & Principal Ecologist - Terrestrial Ecology

Front cover image by Anne Cotton.
Back page image by BTO.

BTO
Looking out for birds

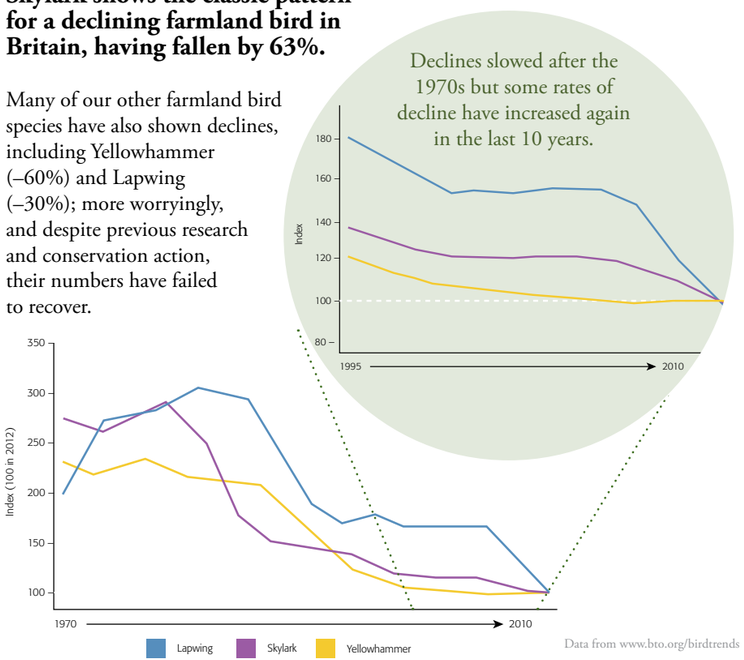
Skylarks are calling out…

…for your help!

THE DECLINE OF FARMLAND BIRDS

Skylark shows the classic pattern for a declining farmland bird in Britain, having fallen by 63%.

Many of our other farmland bird species have also shown declines, including Yellowhammer (–60%) and Lapwing (–30%); more worryingly, and despite previous research and conservation action, their numbers have failed to recover.



Data from www.bto.org/birdtrends

62% THE AVERAGE DECLINE SHOWN BY THOSE FARMLAND BIRDS IN TROUBLE

RANGE CONTRACTION OF AT LEAST **50%** IN CORN BUNTING AND TURTLE DOVE AS SHOWN BY *BIRD ATLAS 2007–11*

THIS RATE HAS INCREASED (ON AVERAGE) DESPITE MORE CONSERVATION MANAGEMENT IN THE COUNTRYSIDE

WHY WORRY ABOUT FARMLAND?

65% OF LAND IN THE UK IS AGRICULTURAL LAND*

IN THE LOWLANDS, THE NON-BUILT-UP LAND THAT MOST PEOPLE SEE **IS FARMLAND:** **82%****

FARMLAND IS THE BRITISH COUNTRYSIDE

*Office for National Statistics.
**Centre for Ecology and Hydrology Land Cover Data

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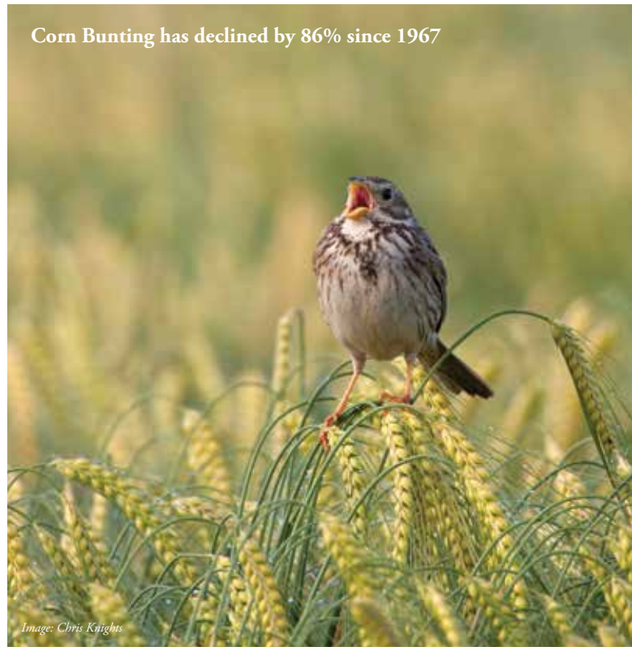
THE SILENCING OF THE COUNTRYSIDE

The facts are deafening but what's going on?

More than 60% of our countryside is farmland. After 20 years of conservation concern, agri-environment schemes (AES) are now THE approach to providing management to improve the farmed environment. With many species showing continuing declines we need to understand why these schemes have had only limited success to date. Worse still, recent results show that some options, notably wild bird seed mix, may actually be having negative effects on target species.

If we are to reverse the declines of farmland birds, we need to understand why the AES measures that previous research indicated would work are failing. We can then influence how the measures are designed and managed. AES management and ongoing monitoring of their effectiveness are funded by government through the Common Agricultural Policy but, like all public spending, are currently being squeezed.

We need your help so we can investigate how AES measures affect farmland birds in practice and find solutions to reverse their declines.



CORRIDORS OF POWER

SCIENCE TO INFORM GOVERNMENT POLICY AND PRACTICE


Image: BTO

Agri-environment schemes (AES) were set up to support farmers and land managers to farm in ways that support biodiversity, protect soil and water and enhance the landscape.

Within AES, farmers can choose from a range of options to protect existing habitats or to create new ones, including many wholly or partly designed to provide resources for birds.

Since 2008, the BTO has conducted several projects measuring the effects of AES on national bird populations. Our results identified limitations, such as the failure of overwinter seed options to provide enough seed at the point of highest demand – the late winter 'hungry gap' – which have been addressed in tweaks to AES option design. However, most farmland bird populations have yet to recover and, while some have stabilised in recent years, there are, as yet, no signs of sustained increases.

There is nobody to blame for this; sometimes the best evidence turns out to be incomplete in the fullness of time. In addition, species are constantly facing new challenges from environmental change, like the advent of solar farms and bioenergy crops. Now we need to find conservation solutions that work within productive farming.

Specifically, we need to understand how AES options affect birds in the real world and how they adapt to and interact with changing land-use, climate, predators, competitors, parasites and diseases. New technologies, and the combination of volunteer and professional ornithology that is the BTO's strength, can help to achieve this.

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HABITAT MANAGEMENT

MAKING IT WORK FOR FARMERS AND WILDLIFE

AES are funded via the EU Common Agricultural Policy, with the vast majority of the funds paying farmers for scheme options. Small amounts are set aside for monitoring scheme performance, but research and development relies on other government funding and has been cut right back.

We understand that farming must, first and foremost, produce food and that food security pressure is now greater than ever. If AES are to work sustainably, they must work within the context of productive agriculture. This will be more and more critical as less AES management is funded due to spending cuts. Many farmers invest a lot of time and effort into protecting wildlife on their farms; we need to ensure that available AES options work for birds and are also practical for the farmers who will implement them.

More and better evidence is needed to inform management options that will fit the bill.

Without further research and effective management, farmland bird declines look unlikely to reverse by themselves. Some species, like Corn Bunting and Turtle Dove, have already crossed the line between reductions in numbers and local extinctions; without new interventions, others like Skylark will continue to decline.


Image: Amy Lewis

HELP US TO FIND A SOLUTION:

WHAT WE NEED TO KNOW	HOW CAN WE FIND OUT?
Are AES overwinter seed measures having negative effects by facilitating diseases and parasites?	Measuring parasite and disease loads in birds in AES habitats. If we find problems, we can propose measures to reduce transmission, *e.g.* by tailoring habitats for target birds or dissuading carrier species.
Have predators learned to use AES measures such as the corridors between hedges and seed crops to prey on target species?	Crop patches could be 'ecological traps': tracking Sparrowhawks to understand how they use these novel habitats will show how tailoring habitats to restrict predator access could help.
Historical BTO data played a major role in identifying causes of past bird declines, but we need more data now and into the future to measure demography in the contemporary landscape. In particular, nest records from open-nesting farmland species are rare; we need more to enhance our capacity to study key species like Yellowhammer.	Farmland and open-nesting species are challenging for nest recording. Funding training and mentoring of nest recorders will bring more volunteers on board and support future monitoring, so that we can identify habitat effects on productivity.


Image: BTO

PLEASE SUPPORT THIS APPEAL TO HELP US TO UNDERTAKE THE NEXT GENERATION OF RESEARCH TO IMPROVE THE FORTUNES OF FARMLAND BIRDS.

BTO Farmland Bird Appeal

A GIFT TO THIS APPEAL WILL HELP US TO INVESTIGATE QUESTIONS LIKE THESE

WHAT WE NEED TO KNOW	HOW CAN WE FIND OUT?
The energy crisis means that solar farms and biofuels are getting more common. How can renewable energy resources best be employed to benefit wildlife as well as energy security? They will have negative effects on some birds, but how can they be managed to minimise the negatives and perhaps even benefit some species?	Surveys of solar farms and bioenergy crops in different locations would show which features increase their value to birds and could be encouraged. This would lead to recommendations to integrate conservation with renewable energy generation for mutual benefits.
How does habitat management in practice affect bird populations and how they use the environment? Are target species being out-competed by other animals within AES habitats?	Using new technology such as tracking and remote camera studies, we can investigate the behaviour and ecology of bird communities, especially in winter. This information will help us to understand the complex interactions between species competing for the same resources and to propose novel habitat management for species that need it.
Skylarks have been affected negatively by AES options, but we don't know why. How do Skylarks use today's farmed landscape, especially through the winter? Where are the problems occurring?	Fitting GPS trackers to Skylarks in farmland will show how they use different habitats in and out of AES. This will show what they are attracted to and what they avoid, as well as fine-scale detail of habitat use, which will help to identify where the problems are.