

Sustainable farming part of larger ecological picture

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(Phys.org)—A larger-scale approach to sustainable farming could be more beneficial for wildlife than our current system of farm-based payments, according to University of Leeds researchers.

As the [global population](#) grows, demands on land become ever greater and [environmental change](#) is likely to add to the pressure.

The team, working within the UK research councils' Rural Economy and Land Use programme, has been investigating the most effective approaches to optimising [sustainable food production](#) while protecting

wildlife.

They conclude that conservation of populations of animals and plants requires thinking and planning across the landscape, because it is at this scale, not the farm scale, that many [ecological processes](#) happen. A key advance in thinking is not how to make each farm more wildlife friendly in itself, but how to make the landscape as a whole better for producing both food and wildlife.

[Farming systems](#) that avoid using chemicals to increase yields are often thought to be the best options from a conservation point of view, but this research has shown that a mixture of high-yield, [intensive farming](#) and land managed for nature can, in some instances, produce both more food and more wildlife than the pursuit of wildlife-friendly farming across the whole landscape.

The team argues for more coherent planning of our whole approach to intensive and non-intensive production. Their research provides important pointers for this kind of strategy at farm, landscape, UK policy and European Common Agricultural Policy level.

Within each area some land needs to be managed for wildlife, and how best to do this will depend on the landscape. Across the UK, different landscapes may also be better at producing food or producing [ecosystem services](#), so one approach may be to concentrate more [conservation efforts](#) in particular areas, such as the uplands and [coastal wetlands](#), which are particularly wildlife friendly, while enabling areas that are best suited to food production to be farmed intensively.

Landscape level planning requires creating and connecting suitable habitat patches, on farms and off farms, into a larger-scale network. Most conventional farms already have areas that are not farmed or produce poor yields and, as precision farming techniques become more

widespread, unproductive land will become very easy to identify. This may be useful for wildlife but only if carefully managed for that purpose within a larger network of habitats.

As the optimal way to manage a landscape to produce farming and wildlife will vary from place to place, a common policy framework may be needed setting overall aims and processes for making decisions, with implementation devolved to county or regional level.

Professor Tim Benton, Professor of Population Ecology at the University of Leeds, said: "Thinking at a larger scale to create sustainable landscapes is the key. Reform of the Common Agricultural Policy provides an important opportunity to create sustainable landscapes, as it is championing 'sparing land' from food production on each farm to contribute to environmental aims. This 'spared land' could constitute a landscape-scale network if properly designed and managed.

"But we also need to plan a strategy that works at national level and look at how intensive farming within sustainable landscapes in some localities could be balanced by prioritising wildlife to a greater degree in others. Only by much larger-scale thinking can we hope to achieve the holy grail of increased production that is sustainable and does not damage irreparably the natural processes that we all depend upon."

Provided by University of Leeds

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