McCracken, D. 2021. Farms can help tackle the biodiversity crisis. *Press & Journal*, 10th May 2021.
https://pages.pagesuite.com/3/5/35cedc5f-6088-428d-b913-1c18a3207e46/page.pdf

Farms can help tackle the biodiversity crisis

It is widely recognised that we are in a climate emergency. But we are also in the midst of a biodiversity crisis.

Nearly half of the 352 species of birds, mammals, butterflies and moths included in the 2019 *State of Nature* report have declined in abundance in Scotland since the 1970s.

And characteristic birds of Scottish farmland such as kestrel and lapwing have declined by 61% and 56%, respectively, since the mid-1990s

As a result, biodiversity also featured in the remits of the farmer-led groups - covering Suckler Beef, Dairy, Arable, Pigs and Hill, Upland & Crofting – established to develop advice and proposals to the Scottish Government on how to tackle climate change.

However, the reports from the groups published in March vary in how much biodiversity management features in their recommendations. Especially with regard to what that would mean in practice for each sector, beyond the suggestion to conduct a farm-level biodiversity assessment.

In hill farming and crofting systems, the biodiversity imperative is primarily on retaining some form of grazing management on the hills and moorlands in order to maintain existing high nature conservation value habitats and wildlife.

While in lowland arable and dairy systems, the biodiversity focus needs to be on redressing the habitat simplification that has occurred through loss of habitats and inappropriate management (including lack of management) of those fragments that remain.

Across Scotland (as elsewhere in the UK and Europe), agricultural intensification since the 1970s has had significant adverse impacts on biodiversity on farmland.

These adverse impacts have been especially widespread in the lowlands. For example, many landscape elements, such as hedgerows, have disappeared, wetlands have been drained and wildflower rich grasslands ploughed up.

Habitat diversity and plant, insect and bird species richness have also declined due to pesticide and inorganic fertiliser use, the simplification of crop rotations, increases in livestock grazing densities and changes to the timing of grazing, cutting and cropping practices.

All these changes have resulted in very simplified lowland agricultural landscapes, dominated by intensively managed grassland and arable fields and with the more biodiversity-friendly habitats confined to small, scattered fragments.

Protecting these remaining habitat fragments must remain a priority in the short-term. But in the medium to long-term we also need to reconnect them through the reestablishment of a range of much more wildlife-friendly features on farmland.

This would not necessarily mean stopping agricultural production completely. Many of the remnant lowland habitats we are concerned about (such as hay meadows, wet grasslands and weed-rich arable crops) have been created, and need to continue to be maintained, by less intensive farming practices.

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The creation of other biodiversity rich habitats (such as hedgerows, wide field margins, wildflower strips and wooded riversides) could be achieved by using areas of the farm where the land is not so agriculturally productive in the first place.

At our Kirkton & Auchtertyre research and demonstration farms near Crianlarich, we have been putting a focus on biodiversity management for the last twenty five years.

Twenty years ago we planted over 250 ha, consisting of the bowl of one our glens and an associated steep sided gorge, with a wide range of native tree species.

The ground vegetation benefited immediately from the cessation of grazing and we now have dense carpets of wood anemone, heather and bilberry in amongst the Molina grassland beneath the trees.

A range of characteristic woodland bird species are now using these areas on the farms. And we have also seen the return of black grouse to nest in the gorge woodland and use an area of the neighbouring moorland as a lekking ground in the spring.

On the lower parts of the farms, we have used the Agriculture, Environment & Climate Scheme (and previous agri-environment programmes) to fence off the margins of the burns running through our inbye fields.

This has allowed tall herbs and other flowering plants to flourish and provides good shelter and feeding habitat for water voles. These margin also contain a riot of insect life in the summer which attracts foraging bats and birds such as swallows and house martins.

We have also established two new wetlands, each containing shallow pools of standing water. These wader scrapes benefit oystercatcher and snipe as well as insects such as dragonflies and damselflies.

Funding from Loch Lomond & The Trossachs National Park has also allowed us to plant trees in the water margins and at the edges of and within some of our inbye fields. Once these trees are more mature they will benefit a range of birds and insects and provide shelter for our livestock.

We have shown that it is possible to integrate biodiversity management successfully into a hill farm. We just need more of such integration to occur on farms across Scotland to help halt and redress the biodiversity crisis.

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