



Scottish
Environment
LINK



**Farm for
Scotland's Future**

Make farming work for nature,
climate and people

Farm for Scotland's Future: the case for change

A report for Scottish Environment LINK
SUMMARY



Farming depends on a stable climate and healthy ecosystems. The way we produce food today is contributing to climate change and nature loss, and climate change and nature loss are already having an impact on food production. These crises will get worse unless we act. The introduction of a new funding system through the Agriculture Bill is an opportunity to rethink how we support our farmers and crofters. There is an **overwhelming evidence base** that shows we need to urgently change the way we produce food and manage our land. The Scottish Government must support farmers and crofters to farm in ways that restore nature and reduce emissions.

85% of people in Scotland want public spending on farming to support methods that restore nature and tackle climate change as well as producing food. (Survation, 2022)

1 The way we farm is a problem for our environment – but we can change.

Since the 1950s, changes in technology, agricultural subsidies and international trade have favoured industrial farming systems. Farms have become larger and more specialised, adopting practices to maximise productivity including the use of chemical fertilisers and pesticides, the separation of arable and livestock production and the adoption of more machinery and automation. The cumulative impact of these changes has been to drive nature loss and increase emissions.

Agriculture is the third largest source of Greenhouse Gas (GhG) emissions in Scotland. In 2020, agriculture represented 18% of Scotland's emissions.

The Climate Change Committee's 2022 Progress Report to the Scottish Parliament has highlighted intensive agricultural practices as a risk to achieving climate mitigation, and states that "the agriculture sector still lacks a coherent strategy to ensure it remains productive and resilient to future climate change."

The Committee's report calls for urgent clarity on how post-CAP policy will "ensure the required emissions reduction in the agriculture sector in the next few years".

The *State of Nature for Scotland* report showed that from 1994 to 2016, 49% of Scottish species have decreased.

The Biodiversity Intactness Indicator ranks Scotland's biodiversity as one of the most depleted in the world – ranking 28th from bottom out of 240 countries.

Many farmers and crofters are producing food in ways that benefit nature and reduce emissions. The new system must reward this best practice and ensure the industry as a whole is supported to meet our environmental objectives.



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There is no food security without a stable climate and healthy natural environment.

2018 and 2021 saw extreme drought conditions, and water scarcity was also experienced in 2019 and 2020.

Extreme weather contributed to losses of up to £161m for Scotland's farmers during 2017 and 2018.

Climate change brings significant risks to Scotland's agriculture sector. Temperature and rainfall extremes could result in loss of productivity. Drought and water stress during the summer could increase the need for irrigation, while farmers could face flooding and water-logging at other times. Drier periods, or runoff during prolonged or heavy rainfall events, could lead to loss of top soil. And an increase in invasive non-native species (INNS) risks an increased range and prevalence of pests and diseases for crops and livestock.

Food production, and ultimately food security, depend on the health of agroecosystems – the health of soil, pollinators and natural pest and disease regulators. Of course we must produce food to be food secure: but without a stable climate and healthy ecosystems, our ability to produce food will increasingly be threatened. A narrow focus on increasing production has already driven an increasingly intensive agricultural system, which has eliminated species diversity both above and below ground.

Soil biodiversity is essential for the land-based food system. When soil biodiversity is compromised through exposure, erosion, compaction, and pollution, it also compromises above-ground biodiversity and releases carbon.

When soil fertility is weakened, farmers often apply chemical fertilisers to compensate. This comes at great financial cost: fertiliser costs in the UK were £1.1 billion in 2020 and have risen sharply since. Nitrogen fertilisers are produced from fossil fuels and contribute to climate change by emitting the potent GhG nitrous oxide (N₂O) which is 300 times more warming than CO₂. Nature-friendly practices reduce the need for chemical inputs, meaning the industry is at less risk from external shocks.

The amount of Scottish soil lost each year is around 920,000 tonnes – enough to fill Murrayfield Stadium.

Soil erosion is estimated to cost £50m per year in Scotland.

Pollinators are essential in food production. Worldwide, over 75% of the leading food crops need insect pollination to assure the amount, quality, or stability of yield.

In Scotland the most important commercial crops benefitting from this are oilseed rape, strawberries, raspberries, currants, apples and beans. The economic value of pollinators was estimated over 10 years ago to be in the order of £43 million per year for agricultural and horticultural crops and honey.

But pesticides, as well as habitat loss and fragmentation, have impacted negatively on pollinators. Pesticides have similarly had an impact on predatory insects which provide natural pest and disease control.

Pollinators are declining – 9% of bee and butterfly species are threatened and populations are declining globally for 37% of bees and 31% of butterflies.



Photo: Andy Hay (rspb-images.com)

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The way we fund farming is unfair and inefficient. Now is the chance to take a better approach.

The current system of direct payments doesn't work for the vast majority of those in the sector. Paying a lump sum for every hectare of agricultural area is a scattergun approach that sees payments go to the farmers who own the most land, instead of paying farmers for managing the land well. The distribution of funding is massively weighted towards a minority of large landowners without achieving public policy objectives, including nature restoration and climate change mitigation.

The top 20% of claimants receive 62% of the direct payments budget – whilst the bottom 40% of claimants receive just 5%.

To meet its targets to reduce emissions and restore nature, the Scottish Government must incentivise ways of farming with climate and nature in harmony with food production – and ensure that payments to farmers and crofters are coupled to achieving the targets attached to these policy priorities.

Read the full report at
www.farmforscotlandsfuture.scot/report

www.scotlink.org
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