



Dr. Rebecca Rowe

The logic and benefits behind the rural payments for biodiversity



Department for
Energy Security
& Net Zero



Outline

- **Current national biodiversity targets**
 - **Background and drivers**
 - **Relationship to regional payment and schemes (SFI, SPS, AECS)**
- **Current regional payment options for perennial crop**
- **Future potential - Ongoing research on managing biomass crops for biodiversity.**



Biodiversity Targets

England/Wales: The Environment Act (2021):

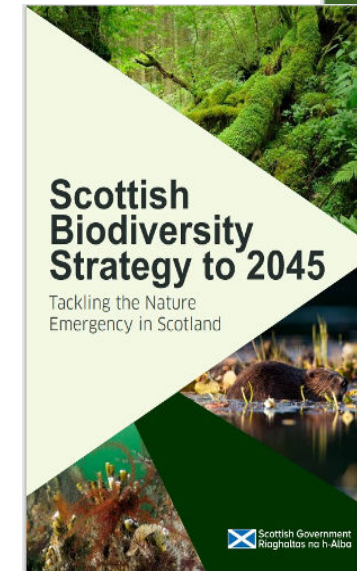
- **Halt the decline in species populations by 2030, and increase populations by at least 10% to exceed current levels by 2042**

Scottish Biodiversity Strategy to 2045 (2023):

- **By 2045, the abundance and distribution of species will have recovered and there will be no loss of diversity within species**

Welsh -Vital Nature, Strategic Steer 2022

- **Goal: Our statutory duty to seek to maintain and enhance biodiversity and build ecosystem resilience in carrying out our functions, is fully embedded as a key consideration in all areas of NRW's work.**



Drivers: Why do Governments Care about Biodiversity?

Cultural/Moral duty

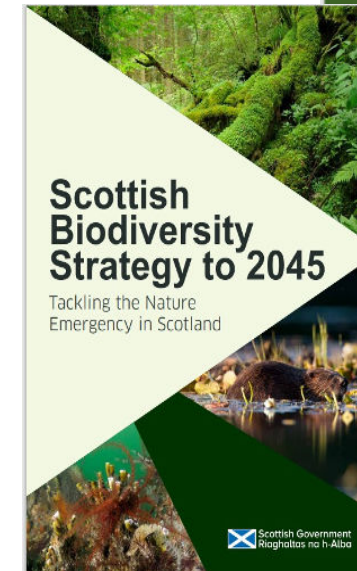
Public concern that we shouldn't be wiping out species.

Cultural ties to wildlife and landscapes, and value to human happiness and well-being (direct financial benefits)

Ecosystem resilience

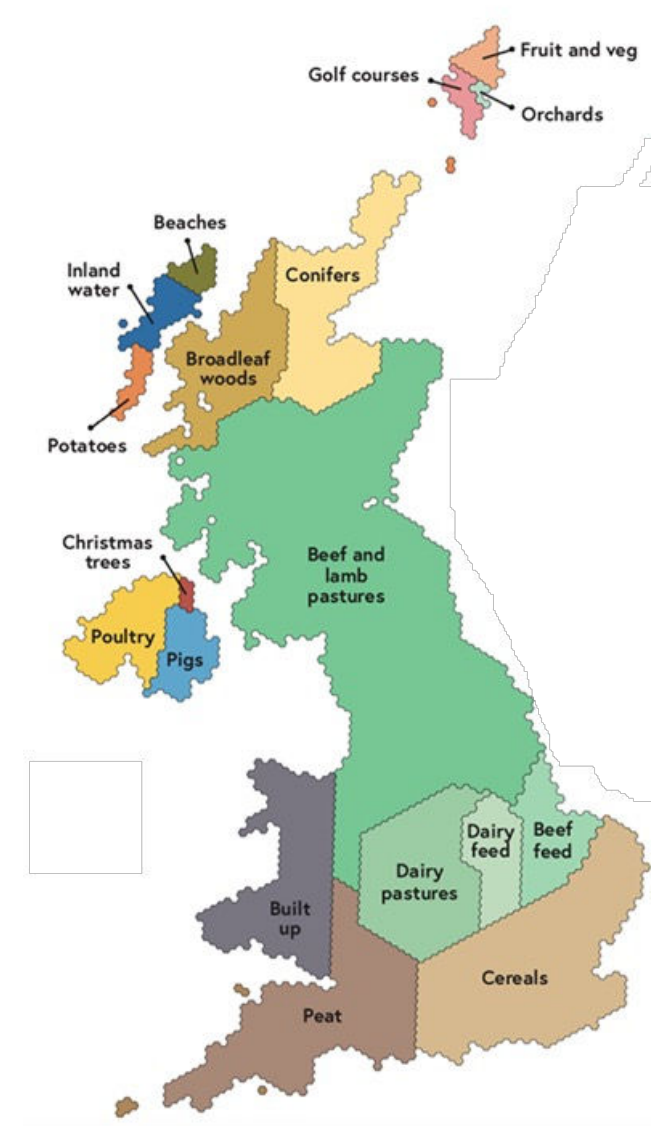
Biodiversity underpins a range of beneficial ecosystem processes with direct financial benefits e.g. pollination, pest control and nutrient cycling in soils.

Diverse systems are more resilient, maintaining and enhancing biodiversity therefore safeguards our current and future agricultural production.



Role of Agriculture in Halting Biodiversity Loss.

- **Agricultural land covers 70% of UK land area.**

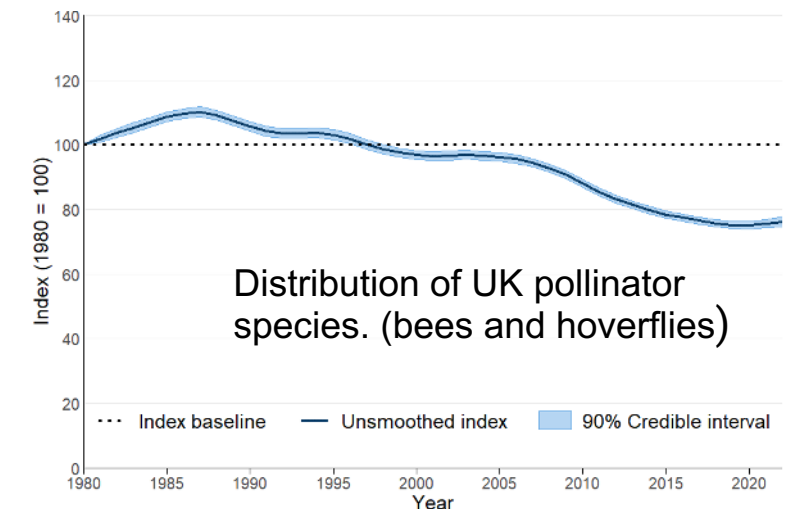
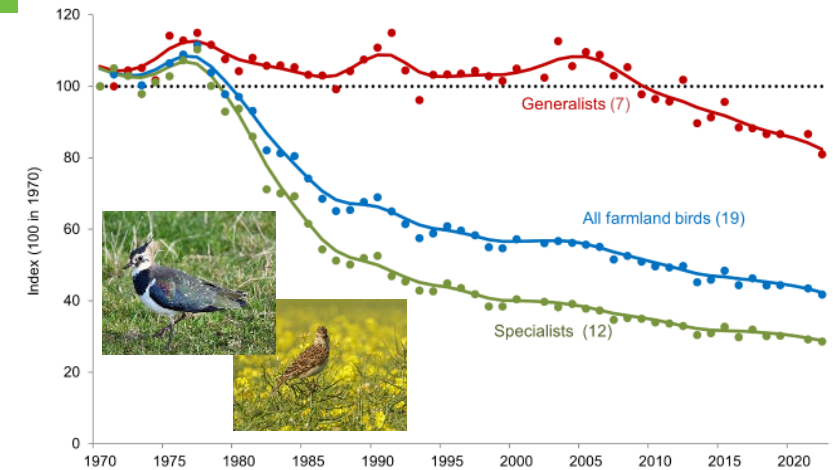


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Role of Agriculture in Halting Biodiversity Loss.

- **Agricultural land covers 70% of UK land area.**
- **Farmland species have shown some of the greatest declines in diversity, range and abundance.**

Abundance of farmland birds



Role of Agriculture in Halting Biodiversity Loss.

- **Agricultural land covers 70% of UK land area.**
- **Farmland species have shown some of the greatest declines in diversity, range and abundance.**
- **Government targets on halting biodiversity loss can only be reached if the management of agricultural land is included.**



To deliver these, we will:

- Pay farmers and land managers to take care of the natural countryside environment, alongside food and other production, so that collectively:
 - They will contribute at least 50% of the target of bringing protected sites into favourable condition by 2042.
 - Including peatland restoration and biodiverse woodland, they will contribute at least 80% of the target to restore or create more than 500,000 hectares of wildlife-rich habitat outside of protected areas by 2042.
 - 65 to 80% of landowners and farmers will adopt nature friendly farming on at least 10-15% of their land by 2030.
- Evolve our Countryside Stewardship scheme to pay for a wider range of actions and reward those who join up across local areas to increase biodiversity.
- Expand the Sustainable Farming Incentive to pay farmers to adopt more sustainable farming approaches.

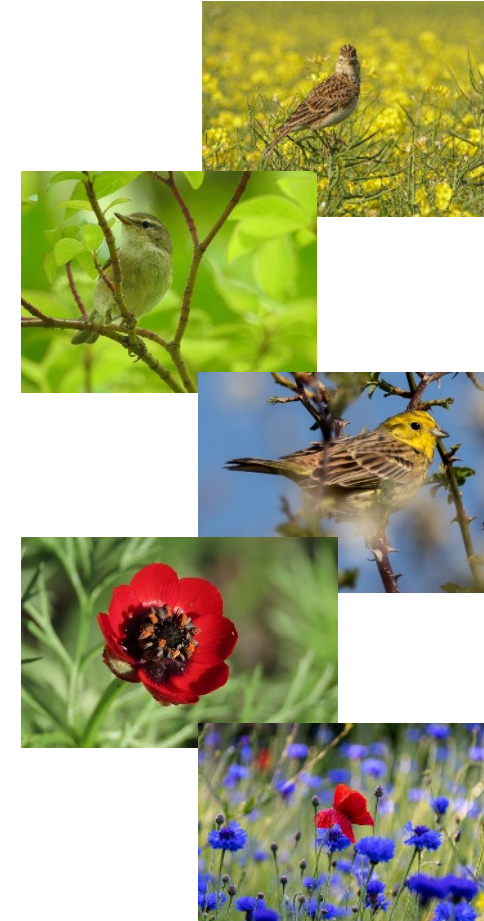
Payment Schemes – To Halt Biodiversity Loss

Multiple scheme active or in development:

England: Sustainable Farming Incentive, Countryside Stewardship. *Scotland:* Agri-Environment Climate Scheme, Preparing for Sustainable Farming. *Wales:* Sustainable Farming Scheme.

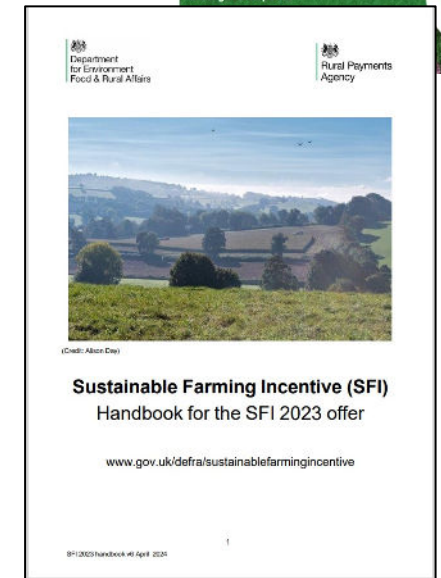
Common underpinning logic

- Payments given for implementing options (actions) which are known to enhance farmland biodiversity of target species.
- Payments for action, not outcome.
 - Payment is for the action of sowing flower-rich margins not based on the number of butterflies
- Payment level is based on the additional cost/loss of income for action not necessarily the value of the action.
- Options are regionally restricted. Targeting options where they will have the greatest positive impact.



Available options for Perennial Biomass Crops

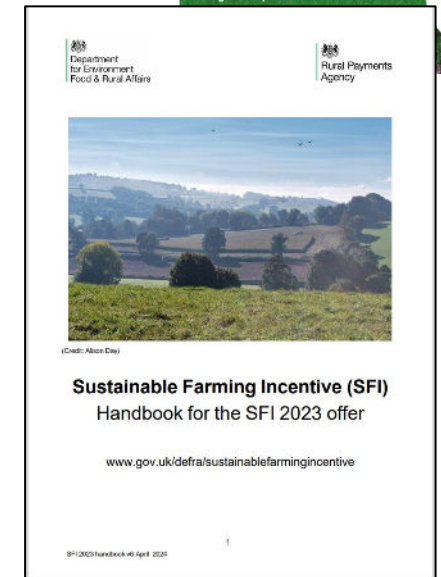
Please check with your local advisor for specific advice. I'm not a rural payment expert!



Available options for Perennial Biomass Crops

England:

Countryside Stewardship & Sustainable Farming Incentive (SFI)



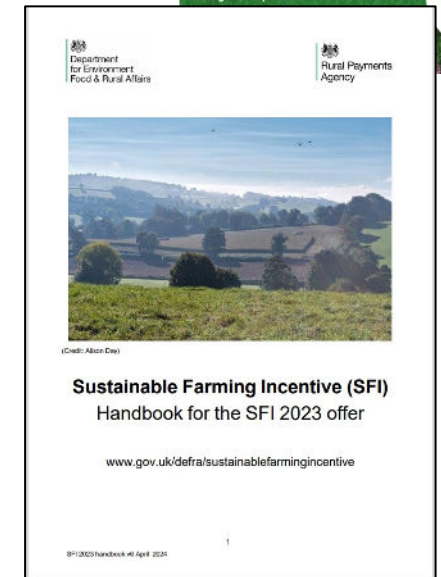
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England:

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Countryside Stewardship (Wildlife Offer)

- **Crop margins and hedgerows around perennial biomass crops (SRC and Miscanthus) are eligible for biodiversity-friendly management actions. Provided wider criteria are met.**
 - **e.g. £673 per ha for AB8: Flower-rich margins. £22.97 per m for new hedgerows.**
- **No specific options covering the cropped area of perennial biomass crops**



Available options for Perennial Biomass Crops

England:

Countryside Stewardship & Sustainable Farming Incentive (SFI)

Sustainable Farming Incentive (SFI)*

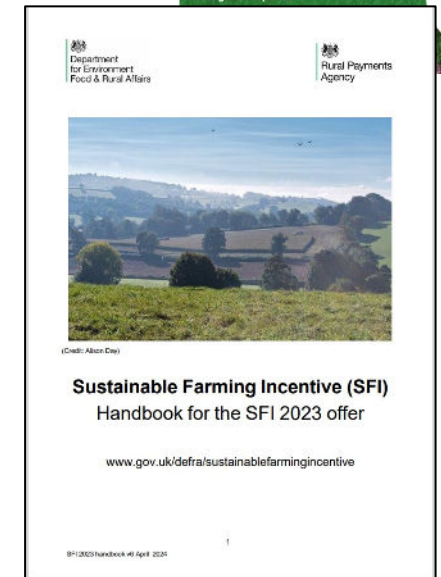
Willow SRC and Miscanthus are classified as "Permanent Crops Non – Horticultural"

Crop margins:

- Flower rich grass margins (IPM2) £798 per ha - *limited to 25% of total holdings*
- Hedgerow management options (HRW1, HRW2, HRW3) £5 - £13 per 100m

Cropped area

- No use of insecticide on cropped area (IPM4), £45 per ha:
- Included in whole farm agreements:
 - Integrated pest management plans (£1,129 per yr)
 - Nutrient management (£652 per year)
 - Soil testing (SOM) & plans (£6 per ha plus £97 per agreement)

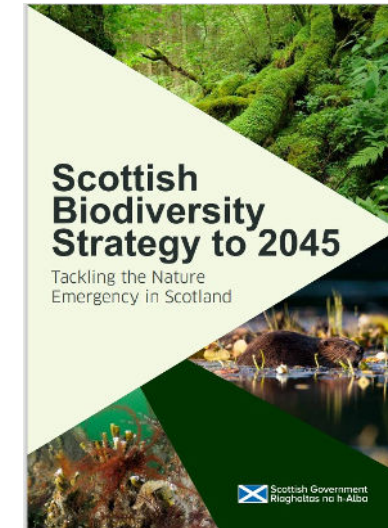


Available options for Perennial Biomass Crops

Scotland:

Limited current options:

- **Agri-Environment Climate Scheme (AECS).**
 - Limited options, only potential options would be wildflower margins and it is unclear if biomass crops are compliant.
- **Preparing for Sustainable Farming (PSF)**
 - Whole farm carbon audits.



These Actions support our efforts to meet CBD Goal A and Targets 1, 2, and 3

3. Nature-friendly farming, fishing and forestry		
Ensure increased uptake of high diversity, nature-rich, high soil-carbon, low intensity farming methods while sustaining high quality food production	Introduce an agricultural future support framework which delivers for nature restoration and biodiversity, as well as high quality food production	Shift half of all funding for farming and crofting from unconditional to conditional support by 2025, with targeted outcomes for biodiversity

1 See [Annex 1](#)

Available options for Perennial Biomass Crops

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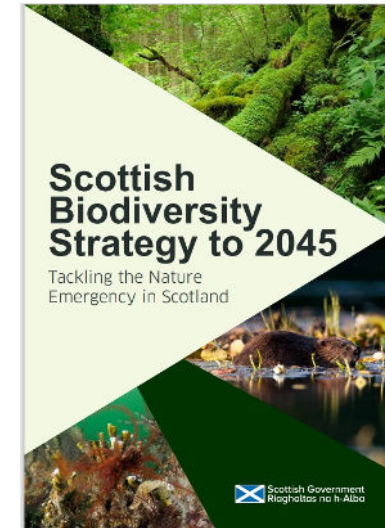
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Sustainable Farming scheme – in development for 2025

- **Statements indicate only tenuous links to role for biomass crops**
"Support for land use change that contributes to our climate and biodiversity goals in line with the recommendations of the Just Transition Commission"

Alternative route? – Biomass strategy draft consultation

- **Section on perennial biomass crops**
- **Request for evidences on land availability and examples of integration perennial biomass crops into landscapes.**



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Wales

Sustainable Farming Scheme 2025 - In development

- **Consultation now closed, awaiting new scheme rules... now 2026!**
- **The draft contained no specific mention of biomass crops.**
- **Was a requirement for "at least 10% [of a farm to be] under tree cover as woodland or individual trees" with "Trees within agroforestry systems included". Final rules will determine if SRF/SRC systems will be eligible.**

Growing for the environment- currently closed

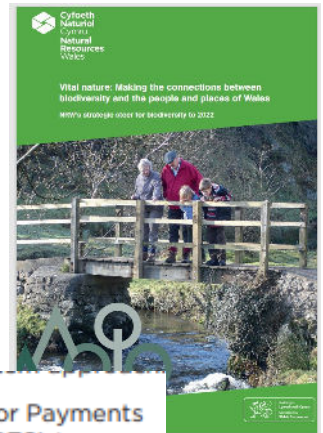
- **Biomass crops not previously recognised as an option, but could align with scheme objectives:**
 - **reduce carbon and greenhouse gas emissions**
 - **adapt to climate change and build greater resilience into farm businesses**
 - **improve water quality and reduce flood risks**
 - **Contribute towards a reversal in the decline of Wales' native biodiversity**
 - **Max award £5,000**



Welsh Government delays Sustainable Farming Scheme until 2026

The Cabinet Secretary for Climate Change and Rural Affairs Huw Irranca-Davies confirmed that BPS would continue to be available in 2025

Rachael Brown
14 May 2024 • 2 min read



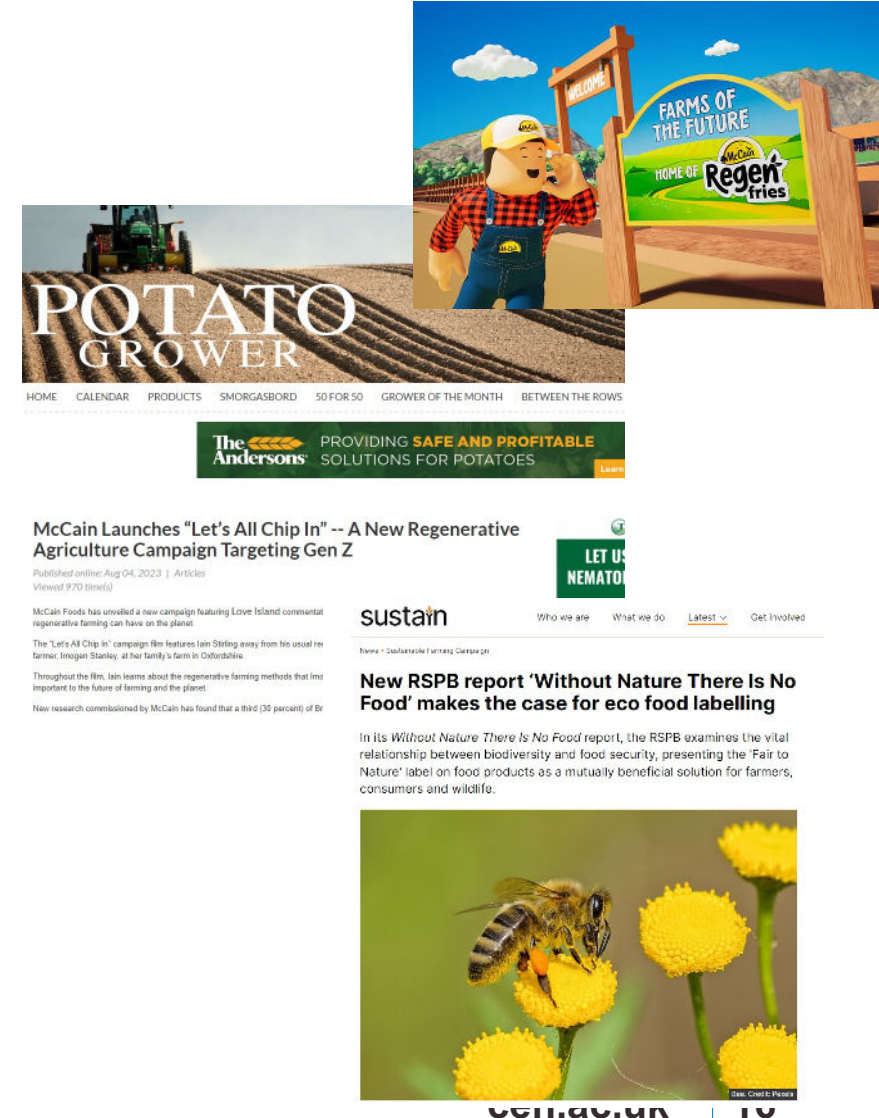
- **Developing approaches for Payments for Ecosystem Services (PES) to identify opportunities for landowners, managers and businesses to deliver biodiversity and ecosystem gains alongside achieving commercial benefits.**

Benefits for landowner

Payments = no cost option

Benefits?

- **Efficiency savings**
 - Can provide returns on parcels of land that would be difficult to cultivate for even for low input energy crops.
 - Good use of wide headlands needed for access in SRC, or potentially for compliance for some SRF species.
- **Ecosystem services**
 - Pollinator abundance
 - Nutrient cycling and soil health
 - Pest control
- **Marketing / Commercial competitiveness**
- **Cultural value**



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McCain Launches "Let's All Chip In" -- A New Regenerative Agriculture Campaign Targeting Gen Z

Published online: Aug 04, 2023 | Articles
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McCain Foods has unveiled a new campaign featuring Love Island commentator regenerative farming can have on the planet.

The "Let's All Chip In" campaign film features Iain Stirling away from his usual red farmer, Imogen Stanley, at her family's farm in Oxfordshire.

Throughout the film, Iain learns about the regenerative farming methods that are important to the future of farming and the planet.

New research commissioned by McCain has found that a third (30 percent) of Br


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New RSPB report 'Without Nature There Is No Food' makes the case for eco food labelling

In its *Without Nature There Is No Food* report, the RSPB examines the vital relationship between biodiversity and food security, presenting the 'Fair to Nature' label on food products as a mutually beneficial solution for farmers, consumers and wildlife.



GEN.CO.UK

Future: Payments for Perennial Biomass Crops.

- **Current schemes are clearly limited, can these be developed/ expanded?**

Future: Payments for Perennial Biomass Crops.

Q. Perennial biomass crops are good for biodiversity so why can't I get paid just for growing them?



Future: Payments for Perennial Biomass Crops.

Q. Perennial biomass crops are good for biodiversity so why can't I get paid just for growing them?

A. Current evidence for the biodiversity impacts of perennial biomass crops is not well aligned with the rural payment approach.

- **Payments requires evidence for:**

- **Impacts on target species of management options, not just the innate value of the crop.**
- **Fully costed management options.**
- **Regional Implications.**
- **The acceptability of options to growers.**
- **Risk of untended consequences**



My current research: Managing Biomass crops for Biodiversity

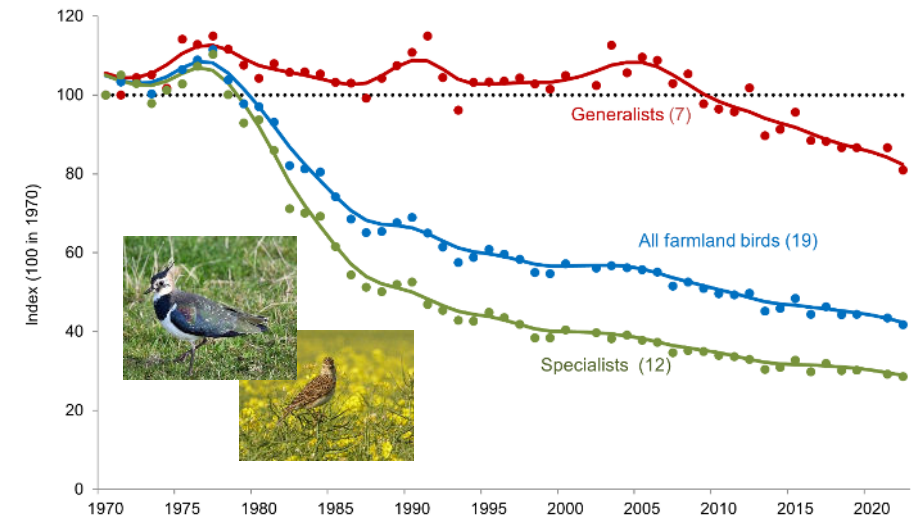
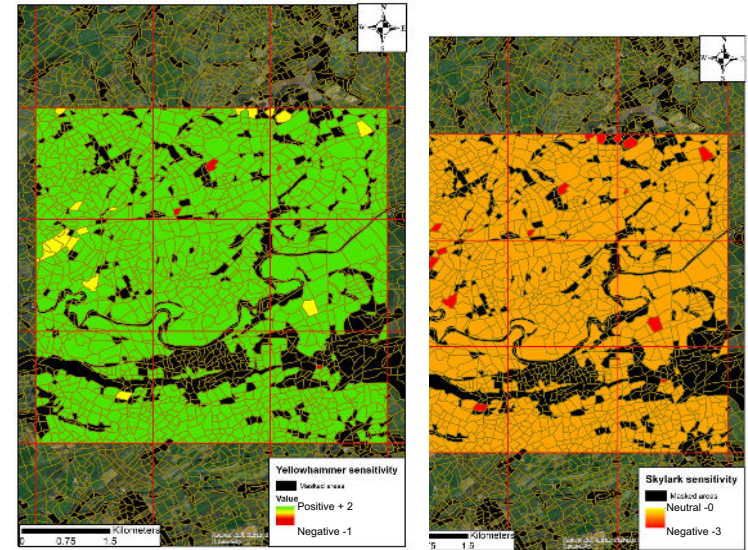
- Exploring management options for SRC and Miscanthus (Defra).
- Evidence review (completed)
- Field work (2023 – 2024)
 - SRC and Miscanthus margin management.
 - Sowing with SFI seed mixes, width, cutting frequency, and herbicide use.
 - SRC crop management.
 - Variety choice, use of intra-row spraying/cultivations.
 - SRC and Miscanthus scale
 - Modelling impacts on bird diversity of scale of planting (BTO)

Crop	Biodiversity-friendly management option	Number of studies providing evidence + overall strength of evidence	No evidence, just suggestion	Acceptability
SRC	Maximising crop edge to area ratio	13; Strong		Low
Miscanthus	Maintaining field margins	3; Strong		High
Mixed grasses/Herbal leys	Increasing ley species diversity by sowing a diverse multispecies ley	2; Strong		High
Miscanthus	Maintaining low crop canopy cover and height / Cutting within first 3-5 years	10; Some, conflicting		Low
SRC	Restricting pesticide use	9; Some		Mod.
SRC	Introducing biodiverse stand edges or rides	7; Some		High
SRC	Allowing a certain amount of understorey growth / Reduced management intensity	7; Some		Mod.
SRC	Stimulating biological control over herbicides, fungicides, pesticides	6; Some		High
SRC	Longer coppice rotation length	4; Some, conflicting		Low
SRC	Wildflower introduction to SRC understorey	3; Some		Mod.
Miscanthus	Reduced management intensity i.e. reduced tillage, fertilisation, weed control	3; Some		Mod.
SRC	Using willow rather than poplar and selecting for "bushy" clones	2; Some		High
Miscanthus	Increasing crop patchiness / Leaving unplanted patches within the crop	2; Some		Low
Reed Canary Grass	Maintaining field margins	2; Some		High
SRC	Increased structural density	2; Some, conflicting		High
SRC	Structural densities	2; Some, conflicting		Low
SRC	High mortality and retaining deadwood	1; Some		Low
SRC	Phased planting and coppicing of large SRCs	1; Some		Mod.
SRC	Structural richness/Management of structural density	1; Some		Low
SRC	Different species, and genotypes (and sexes) of the same species	1; Some		Mod.
SRC	Fertilizer application	1; Some		Mod.
SRC	Planting schedule	1; Some		Mod.
SRC	Canopy cover and height	1; Some		Low
SRC	Retaining patches of SRF into the next cycle	1; Some		Mod.
SRC	Planting non-native tree species	2; Weak		Mod.
SRC	Retaining deadwood	1; Weak		Low



My current research: Target species and regional impacts

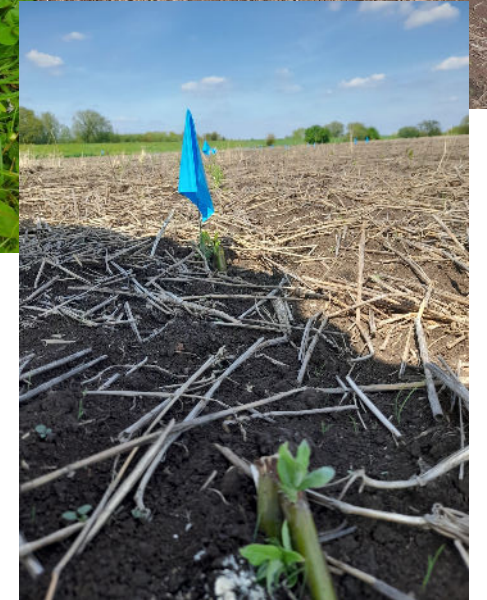
- **Spatially explicate impacts on target species - Heat maps for 19 farmland birds:**
 - **Combing: BTO bird density maps, published survey data to assign land cover preferences, UKCEH land cover map.**
 - **Resolution of underpinning data 1 km.**
 - **Exploring combining this with social acceptability.**



My current research: Companion cropping

- **Small trial on the potential for companion cropping in SRC willow**
 - **Exploring impacts on companion crop growth, weed suppressing and willow survival.**
 - **Three sites, two newly established one mature**
 - **6 plants species.**
 - **White wild & Alsike clover, Birds foot trefoil, Yellow trefoil, Self heal, Rib Leaved Plantain.**

Current SFI payments for companion cropping in arable crops is £55 per ha



Conclusion

- Biodiversity payments for biomass crops are currently limited with focus on crop margins.
- Research is ongoing that could inform the expansion payments
- Enhancing biodiversity in agricultural landscape is critical to halt the decline of biodiversity in the UK
- Biomass crops have potential to support efforts, through both their innate biodiversity value and through the development of biodiversity positive management options.

Thank you

For more information
please contact:

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UK Centre for
Ecology & Hydrology