

Cool Farm Nature: an evidence-based biodiversity metric for the Cool Farm Tool

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Kellogg's

The Cool Farm Tool

CFT
COOL FARM TOOL



The Cool Farm Alliance

Founding partners:



Members:



The Cool Farm Tool

An **easy to use** and **standardised** tool for calculating **on-farm** greenhouse gas emissions associated with a range of **crop** or **livestock** products, applicable globally

- ✓ Scientifically robust
- ✓ Farmer-friendly
- ✓ Industry-backed



New metrics under development:

Water
Biodiversity
Economics

Measuring on-farm biodiversity

Outcome-based

DIFFICULT, BUT SURE OF OUTCOMES

- Count animals and plants
- Measure proxies: habitat diversity, length of hedgerow/woodland edge

Action-based

- Area under agri-environment management
- Specific interventions (buffer strips)
- Approaches to farm management: tillage, agrochemical use

EASY, BUT UNSURE OF OUTCOMES



The Gaia Biodiversity Yardstick



3.3 Which measure do you take in favour of the field fauna or flora?

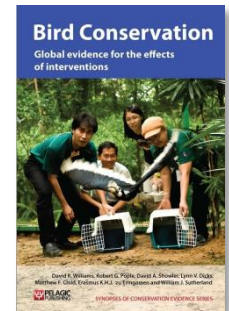
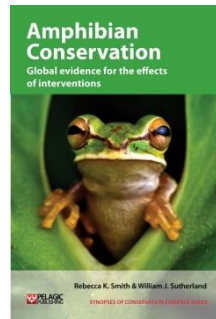
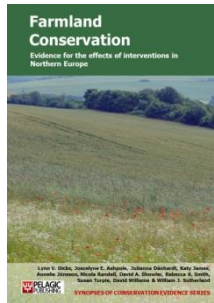
For a part of the plot (at least 0.5 ha), or margins at least 3 m wide

You can select multiple answers.

- ☒ Artificial fertiliser not used when grain grown
- ☐ No mechanical and chemical weed control during the cropping period
- ☒ Grain (other than maize) grown for at least 3 of the 6 years on a plot
- ☐ The grain stubble is left standing until the next spring
- ☐ A (small) part of the field is not harvested (feed for fauna)
- ☐ None of the above

**EASY, BUT UNSURE
OF OUTCOMES**

Cambridge evidence assessment



Example measure	Median effectiveness score	Median certainty score	Category
Plant nectar flower mix	>60	>60	Beneficial
Manage hedges to benefit wildlife	>60 40-60	40-60 40+	Likely to be beneficial
Take field corners out of management		<40	Unknown effectiveness
Freeze amphibian eggs for future use	<40	40-60	Unlikely to be beneficial
Reduce grazing intensity	<40	>60	Likely to be ineffective or harmful

Expert assessment process

- Experts from research, NGOs and industry
- Read summarised evidence
- Score and comment on:
 - i) Effectiveness of intervention
 - ii) Certainty of evidence
- Two rounds of scoring (Delphi process)
- Place interventions in categories
- Final round of scoring if disagreement



Cool Farm Nature
Action-based
(**EASY**), with
evidence of
outcomes


Weighting the scores with evidence....



Example measure	Median effectiveness score	Median certainty score	Category	Score added
Plant nectar flower mix	>60	>60	Beneficial	2
Manage hedges to benefit wildlife	>60 40-60	40-60 40+	Likely to be beneficial	1
Take field corners out of management		<40	Unknown effectiveness	0
Uncultivated margins (<i>effect on arable flora</i>)	<40	40-60	Unlikely to be beneficial	0
Reduce grazing intensity	<40	>60	Likely to be ineffective or harmful	Excluded



Cool Farm Nature prototype (NW Europe only)



Biodiversity assessment (ALPHA)

Diversity of products (4 / 17)

1.1. How many different crops do you grow?

☐ I have 1-3 types of crop

☒ I have 4-6 types of crop

☐ I have >7 types of crop

☐ I do not grow any crops

☐ I grow at least one rare type of crop, namely ..

1.2. Do you grow more than 1 variety of any of your crops?

☐ No, always 1 variety of each crop

☒ Yes, for 1-2 of my crops I grow more than one variety

☐ Yes, for at least 3 of my crops I grow more than one variety

Start

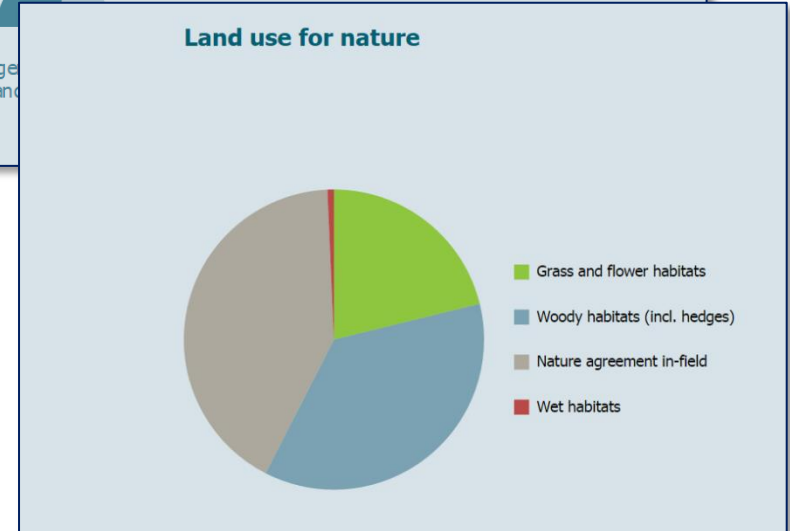
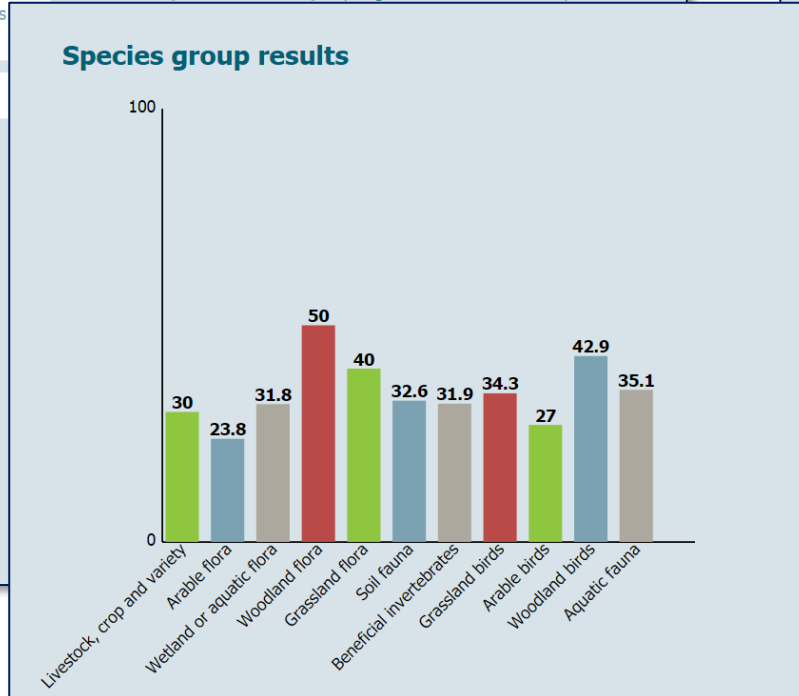
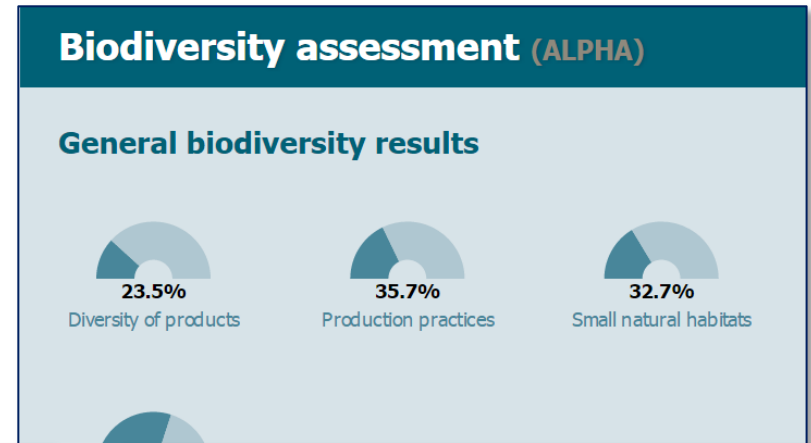
Diversity of products

Production practices

Small natural habitats

Larger natural areas landscape

Results

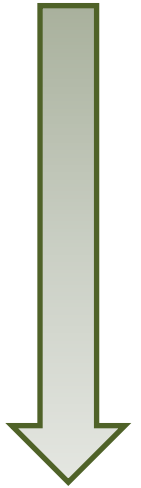


31 questions

The future

- Testing the N European prototype: ADAS, Kellogg's, CLM
- New evidence summary and assessment for Mediterranean farmland (2015-2017)
- Large datasets on biodiversity management and land use across supply chains
- Understanding trade-offs among sustainability measures
- Improved conditions for wildlife on much of the world's farmland

2015



2025





Find out more:

www.coolfarmtool.org

www.conservationevidence.com

www.clm.nl

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