Block 1

AgroecoList: A Reporting Checklist for Agroecological Research

About the project

This ~5 minute survey is for *scientists/reviewers/editors working in agroecology.* It aims to: 1. get feedback on a reporting checklist that we have designed for agroecological research 2. understand your views on existing reporting standards and guidelines

Many publications lack sufficient information to be correctly interpreted, replicated, or for the data to be reused for synthesis or reanalysis. This reduces scientific rigor and impedes scientific progress. Reporting guidelines, such as checklists, are known to improve reporting standards, and are increasingly recommended in journal guidelines. This survey is about a reporting checklist (AgroecoList) that we (an international team of 23 experts) developed for agroecological research. AgroecoList can be used as a guide or a reporting template for authors, reviewers, and editors.

About the survey

The survey is being conducted by the University of Reading. Participation is voluntary. If at any stage you wish to have further information about the research project, please contact Dr Amelia Hood at: a.s.hood@reading.ac.uk.

How we handle and store your data

The survey is anonymous, but you can provide your email to get updates on the project. If you provide your email, your data will be held by the University of Reading for the duration of the project (until 2024). The data will be stored on a secure drive only accessible to the University of Reading (Dr Amelia Hood) and the University of Cambridge (Prof. William Sutherland). If you provide your email, you can withdraw it and associated data by contacting Amelia Hood (a.s.hood@reading.ac.uk). It will not be associated with any publicly available data and will not passed on to any third parties. By participating you are consenting to these terms of data storage and use which have been approved by the University of Reading's Ethics Committee.

Your data protection rights

You have certain rights under data protection law which are:

- · Withdraw your consent, for example if you opted in to be added to a participant register
- · Access your personal data or ask for a copy
- · Rectify inaccuracies in personal data that we hold about you
- Be forgotten, that is your details to be removed from systems that we use to process your personal data
- · Restrict uses of your data
- \cdot Object to uses of your data, for example retention after you have withdrawn from a study

Some restrictions apply to the above rights where data is collected and used for research purposes. You can find out more about your rights on the website of the Information Commissioners Office (ICO)

(https://ico.org.uk). You have a right to complain to the ICO if you are unhappy with how your data has been handled. Please contact the University Data Protection Officer in the first instance at imps@reading.ac.uk, or in writing to: Information Management & Policy Services, University of Reading, Whiteknights, P O Box 217, Reading, RG6 6AH.

□ Please check the box to indicate your acceptance of these conditions

What is/are your current country/countries of affiliation? (use cmd/ctrl to select multiple)

Afghanistan Albania	
Algeria Andorra	
Angola	
Antigua and Barbuda Argentina	
Armenia	
Australia Austria	
Λαστιτα	
Which climatic zone(s) has Select all that apply.	your research been based in?
Subtropical	
Temperate	
 Polar and subpolar 	
Which system(s) has your r Select all that apply.	research been on?
Arable	
Pastoral	
Agroforestry	
Mixed	
Other (please specify)	
Which scientific field(s) bes use cmd/ctrl to select multiple)	t describes your research (current and past)?
Agronomy	
Animal behaviour	
Biochemistry	
Botany	
Computational biology	
Conservation biology	
Ecology	
Entomology	
Evidence-synthesis	
Evolutionary biology	
Genetics	

- Landscape ecology
- Microbiology
- Physiology
- Plant pathology
- Social science
- Soil science
- Taxonomy
- Zoology
- Other (list multiple if you want)

How many years have you worked in agriculture (including research, industry and practice)?

\checkmark

How many years have you worked in academia (including PhD)?

$\mathbf{\vee}$

What is your experience w	ith publishing	agroecological	research?
Select all that apply.			

- Author
- Reviewer
- Editor

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Had you heard of reporting guidelines prior to completing this survey? E.g. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), ROSES (RepOrting standards for Systematic Evidence), TTEE (Tools for Transparency in Ecology and Evolution)
⊖ Yes
○ No
○ Not sure
Do you think reporting guidelines improve reporting standards?

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⊖ Yes	
○ No	
○ Not sure	
Have you used reporting guidelines before? Select all that apply.	
Yes: as an author, to help conduct a study	
Yes: as an author, to help write a study	
Yes: as a reviewer, to assess manuscripts	
Yes: as an editor, to assess manuscripts	
Yes: other (please specify)	
No	

Not sure

06/

Rate the current standard of reporting in agroecological studies

	1 - very poor	2 - poor	3 - ok	4 - good	5 - excellent	Don't know
Experimental/sampling set- up (e.g. number of replicates, size of plots)	0	0	0	0	0	0
Study site description (excluding soil) (e.g. elevation, site map)	0	0	0	0	0	0
Soil description (e.g. soil type)	0	0	0	0	\bigcirc	\bigcirc
Livestock management (e.g. livestock species)	0	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Crop & grassland management (e.g. fertiliser type)	0	0	0	0	0	0
Outputs (e.g. crop yield)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc

Block 3

AgroecoList

AgroecoList is a reporting checklist for agroecological studies. Reporting checklists are known to improve reporting standards, and are increasingly recommended in journal guidelines. AgroecoList was developed by a team of 23 researchers.

AgroecoList can be used in two ways:

 $\ensuremath{\mathbf{1}}.$ As a memory aide to authors, reviewers, or editors

2. As a template to fill in and be included in a table format in publications, e.g. in supplementary information. This would facilitate automated data extraction via machine learning, which would promote data reuse, such as synthesis.

Collecting all of the variables in AgroecoList represents a significant body of work, and in many cases authors

Qualtrics Survey Software

will not have information for every variable. **Missing values ("Not recorded") are expected, and should be accepted by readers, reviewers and editors.** The list is to encourage the inclusion of variables that are easy to report and may have been otherwise excluded, it should not be used to overburden authors by requesting additional information that is not easy to add and critical for the original study.

Some of the variables are more ambiguous than others. We have loosely-defined the parameters of some variables as strictly defining them would be too restrictive; we recommend that authors define these variables within the context of their study while also considering the potential contexts within which their study may be reused.

For further explanations of these variables, <u>click here</u>.

Variable Type	Variable Name
Experimental/	Start & end date of study
sampling set-	Start & end dates of any interventions/treatments
up	Dates/frequency that measurements were taken
	Size & shape of experimental units (e.g. subplot/plot/field/farm)
	Experimental/sampling designs (e.g. blocked/randomised, distance between plots)
	Number of replicates
Study Site	Co-ordinates & co-ordinate system (e.g. WGS84)
	Country
	Site map
	Elevation
	Slope & aspect
	Weather during study period
	Extreme/atypical events (e.g. flooding, fire, pest outbreak)
	Farm/crop/livestock certification/scheme (e.g. Organic)
	Artificial structure (e.g. open vs polytunnel, barn vs field)
	Landscape context (e.g. field-edge management, proximity to forest)
	Previous land use type & timing of transition (e.g. if converted from forest)
Soil	Soil type & soil system (e.g. USDA)
	Soil texture (silt, sand, clay)
	Soil pH
	Soil organic matter
Livestock	Livestock species & breed (including managed pollinators)
management	Livestock density
	Livestock feeding regime (e.g. free grazing/supplemental)
	Livestock agrochemicals type, rate & timing (list all) (including medicines)
	Livestock demography (e.g. lifestage/sex)
	Livestock management timing (e.g. release/rotations)
Crop &	Crop species & variety (including main crops, secondary crops & non-cash-crops)
grassland	Crop planting density & arrangement (e.g. broadcast/inter-row)
management	Crop planting/harvesting timing (including rotations)
	Cultivation method, depth, & timing
	Mowing/topping method, height & timing
	Weeding method & timing
	Physical control of animal pests (e.g. trapping) method & timing
	Biological control agent species, release rate & timing
	Irrigation method, rate & timing
	Fertiliser type, rate & timing (list all)
	Crop protection chemicals type, rate & timing (list all)
	Other chemicals type, rate & timing (list all)
Outputs	Yield
	Quality and/or Commercial grade

Would you or your students use AgroecoList for your next agroecological study?

	Yes	Maybe	No	N/A
Author	0	\bigcirc	\bigcirc	\bigcirc
Reviewer	0	\bigcirc	\bigcirc	\bigcirc

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5/02/2023, 14:56	Qualtrics Survey Software				
	Yes	Maybe	No	N/A	
Editor	0	0	0	\bigcirc	

Any other comments on reporting standards in agroecology or AgroecoList?

If you would like to be updated when AgroecoList is available for use, please leave your email below: