

Combining data across the network and future outputs of LegacyNet

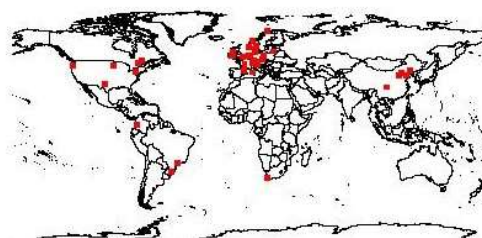
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Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

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Legacy^{Net}



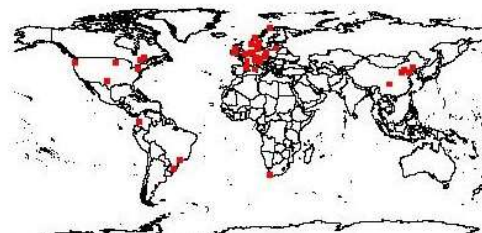
May 2021

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Outline

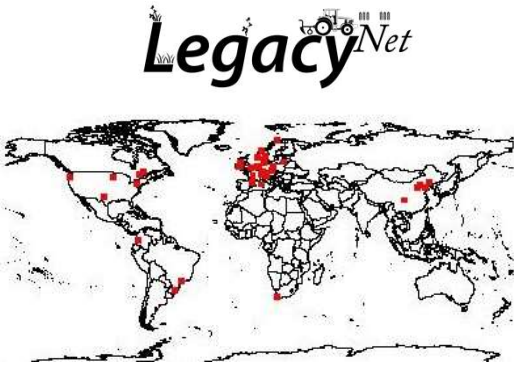
1. LegacyNet data collection effort
2. LegacyNet data sharing principles
3. Analysing multi-site data
4. LegacyNet publications

Legacy^{Net}



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1. LegacyNet data collection effort



- 26 sites (so far)
- 52 plots (at least) per site
- **1352 plots in total (so far) across the globe! Thanks to you all!**
- Measured over >18 months grassland phase, and over one growing season for the follow-on crop phase.

We have a common data recording spreadsheet for a reason!

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Data recording spreadsheet

- Template is available on our website at https://legacynet.scss.tcd.ie/experiment_details.php
- Each site will record their data in the Excel file.
- These individual spreadsheets will feed into the combined database.

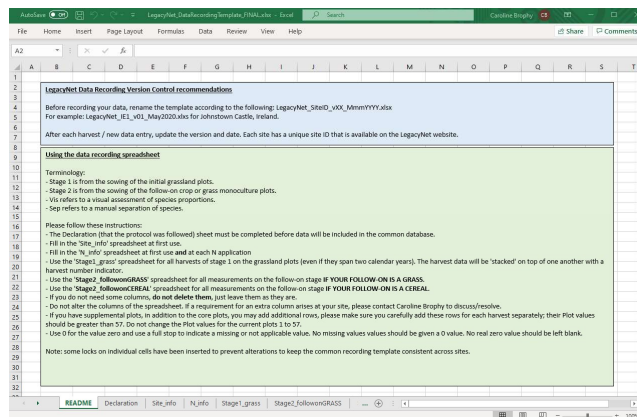
This part is far from trivial

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Data recording spreadsheet details



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Data recording spreadsheet details



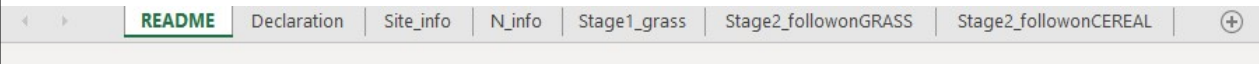
- Please read this information. NB: file naming and version control advice.
- Declaration to confirm you have read and followed the protocol.
- Site information: location, PI, species, etc.
- Fertiliser information: fertiliser dates, amount per application, etc.
- Stage 1: all measurements recorded during the grassland phase
- Stage 2: all measurements recorded during the grassland phase. You will use only one of these sheet, there is:
 - One for grass monoculture follow-on crop
 - One for cereal follow-on crop

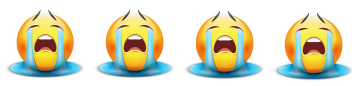
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Data recording spreadsheet – general advice



- If you mess with the Excel template: 

- Thank you for **not**:
 - Creating new or deleting any sheets
 - Deleting or moving any columns on any sheet
- If you need to add columns or rows on a sheet, put at the end
- Please **do ask** if you've questions



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Plot layout file

- All sites must send their plot layout file before sowing their site.
- Template is available on our website at https://legacynet.scss.tcd.ie/experiment_details.php
- If you did not do this before sowing, please send it now (required for entry to common database).

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2. LegacyNet data sharing principles

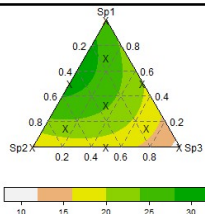
- Members agree to
 - Contribute their data for the purpose of constructing a LegacyNet database for multi-site analyses and publications.
 - Submit their data on time – there will be (reasonable) deadlines set for participation in common papers.
- At a later stage, we will publish the database open access (after all primary network publications are well-advanced or published).

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3. Analysing multi-site data



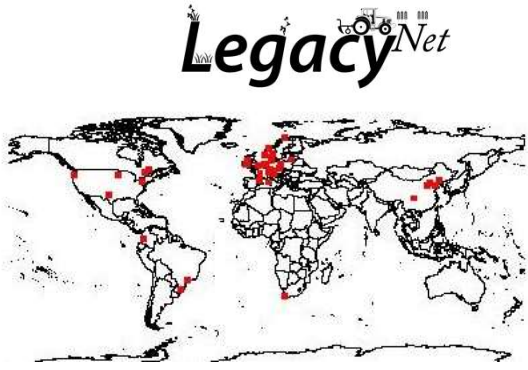
- The Diversity-Interactions modelling approach for simplex data
 - Kirwan et al (2009) Diversity-interaction modelling - estimating contributions of species identities and interactions to ecosystem function. *Ecology*, 90, 2032–2038.
 - Moral, Connolly and Brophy (2020). DImodels: Diversity-Interactions (DI) Models. R package version 1.0. <https://CRAN.R-project.org/package=DImodels>
- Example of a multi-site Diversity-Interactions analysis
 - Finn et al (2013) Ecosystem function enhanced by combining four functional types of plant species in intensively managed grassland mixtures: a 3-year continental-scale field experiment. *Journal of Applied Ecology* 50 (2013): 365-375.

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4. LegacyNet publications



- We will have a highly valuable combined dataset from our global experiment.
- We anticipate several network-wide publications in high impact international journals.

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LegacyNet publication guiding principles

- **Multi-site LegacyNet journal publications**
 - There will be several, with the PI from each site a co-author
 - If you are interested in leading a paper, put your name forward
- **Individual site journal publications**
 - **Not allowed** on core data / research questions
 - **Allowed** if additional measurements or treatments
- **Conference presentation**
 - Generally allowed, must be communicated to LegacyNet Directors well in advance of abstract / paper submission, particularly when there are published proceedings

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LegacyNet Publications committee

- The publications committee will coordinate topics, timings and responsibilities for LegacyNet publications.
- Expressions of interest were invited last year for membership of this committee and are still being accepted (email the LegacyNet Directors to declare your interest).
- We will establish this committee in the next 6-12 months.

Funding

- Applications in progress and review to fund resources to work on the combined LegacyNet dataset
 - Please contact us if you know of a prospective candidate interested in applying for a Postdoctoral Fellowship
- Please contact us if you are applying for LegacyNet funding, we are happy to provide support

Questions?

LegacyNet

