## Publisher Details

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| What is your name?  The name of the person(s) who created (this version of) the dataset. Include ORCID ID if available. Usually the Walsh Scholar. |
| Lisa McGrane Orcid 0000-0003-3220-2486 |

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| What is your email address? |
| Lisa.McGrane@teagasc.ie |

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| Alternative contact person  Person /role who can be contacted for more information on this dataset. Usually your supervisor. |
| Dr. Philip Creighton |

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| Alternative person contact person email address |
| Philip.Creighton@teagasc.ie |

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| Who is the publisher or organisation responsible for the resource?  The name of the source organisation/s, e.g. Teagasc and UCD. |
| Teagasc and UCD |

## General Information

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| Title of the dataset  A descriptive title for the dataset that will distinguish it from other datasets, in particular similar datasets from Teagasc |
| AYAF PGSH Plot trial |

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| Description  A concise description of the dataset outlining what the dataset contains, to where does the data apply, when, how and why the data was collected, and by whom. |
| This data contains grassland data: Grassland yields, forage contents, nutritive quality and tiller density results, from a four-year plot study (2019-2022) in Teagasc, Athenry, Co. Galway. There were five different sward types and three different post grazing sward heights imposed.  All data was collected at Teagasc Athenry, by Lisa McGrane and Philip Creighton. |

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| Landing Page  A website URL where the data is available or that provides more context to the data. |
| NA |

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| Title of the thesis the data relates to? |
| Lisa McGrane (Not yet compiled) An evaluation of alternative forages in combination with perennial ryegrass to increase animal performance and output in sheep pasture based production systems |

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| Name of the project the data relates to? |
| Trial Code: AYAF (Athenry Alternative Forages) Title: An evaluation of alternative forages in combination with perennial ryegrass to increase animal performance and output in sheep pasture based production systems |

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| Project grant Number and/or SmartSimple identification number? |
| ARMIS 0118, Walsh Scholar 201790 |

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| Is the data related to other data/publications/resources?  Relationships with any ancillary datasets or publications, if applicable; file names of other documentation being submitted along with the data and that would be helpful to a secondary data user, such as pertinent field notes or other companion files, publications, etc. Provide doi if available. If submitting more than one data package as part of your research please ensure you denote it here. |
| Similar trials carried out as part of the same PhD studies/ Data files archived:  AYAF Animal Performance  AYAF Grassland AYAF Reseed Methods plot trial |

## Data Themes

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| Keywords/tag  List keywords which describe the subject of this data in commonly used terms abstract terms e.g. climate change, farmers, animal health, water quality, biodiversity, hydrology, food sensory, etc.  Put commas between each keyword. |
| Grassland, sheep, sward diversity, clover, herbs, plantain, chicory, white clover, red clover, yield, sward composition, sward quality, tiller density |

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| Which of the following Teagasc research departments does the data relate to? |
| |  |  | | --- | --- | | Animal and Bioscience Research | Agricultural Catchments | | Grassland Science Research | Food Biosciences Research | | Livestock Systems Research | Food Safety Research | | Pig Development | Food Chemistry & Technology Research | | Crops Research | Food Industry Development | | Soil, Environment and Land-Use Research | Food Quality and Sensory Science | | Forestry Development | Agricultural Economics and Farm Surveys Research | | Horticulture Development | AgriFood Business and Spatial Analysis Research | | Animal Breeding | Farm Management and Rural Development Knowledge Transfer | |

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| What domain is the data related to?  Tick as many as appropriate |
| |  |  | | --- | --- | | Agronomic data | Grazing behaviour data | | Animal behaviour data | Land use change data | | Consumer data | Livestock data | | Crop data | Longitudinal data | | Education and extension data | Market data | | Environmental data | Metabolomics data | | Farmer data | Nutrient cycling data | | Farm management data | Personal data | | Field data | Pest and disease surveillance data | | Food chemistry data | Psychological/behavioural data (human) | | Food composition data | Phenotypic data | | Food nutritional analysis data | Policy data | | Food packaging and storage | Remote sensing data | | Food processing data | Socioeconomic data | | Food quality data | Sociological data | | Food safety data | Soil data | | Food sensory data | Water management data | | Forestry data | Weather/climate data | | Genetic data | Yield data | | Geospatial data | Other | |

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| What type of data are captured by the data?  Tick as many as appropriate |
| |  |  | | --- | --- | | Annotations | Simulation data, models & software code | | Audio data (e.g. interviews) | Sketches, diaries in digital form | | Data automatically generated from or by computer programs | Source codes | | Databases (e.g. Access, MySQL, Oracle) | Spreadsheet | | Data collected from sensors/instruments (e.g. eddy covariance towers) | Standard operating procedures and protocols | | Digital photographs and other images | Survey results | | Documents or reports (e.g., Word, PDF, etc.) | Structured text files (e.g .xml, .json) | | Interview transcripts | Text files (e.g. .txt) | | Laboratory notebooks (digital) | Text data | | Models/algorithms | Websites and blogs | | Not digital (e.g. samples) | Video files | | Observational data |  | |

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| Where do you currently store this data? |
| |  |  | | --- | --- | | Teagasc managed network storage (e.g. H:Drive) | Commercial cloud service (e.g. Google drive, Dropbox, OneDrive, etc.) | | University managed network storage | Generic data repository (e.g. Zenodo) | | Hard disk drive of a computer/laptop owned by Teagasc | Discipline specific data repository | | Hard disk drive of a computer/laptop owned by University | Other | | External hard drive or memory stick/USB/Flash drive) |  | |

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| If you use a cloud service to currently store this data (e.g. Google, Dropbox, OneDrive, Box), is this a personal account, or one provided by your institution? |
| |  |  | | --- | --- | | Personal account | A combination of personal and institutional cloud services | | Teagasc owned account | Other | | University owned account |  | |

## Methodological Information

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| How was the data collected or generated? (e.g., experiments, surveys, simulations) |
| This data was collected on the research demonstration farm, Teagasc, Athenry.  Herbage yield, sward composition and tiller density were measured on farm.  Sward quality analysis was carried out using ‘Grangegrass2012’ using Near Infrared Spectrometry in Teagasc Moorepark Co.Cork. |

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| What instruments or tools were used for data collection? |
| Quadrat and shears, weigh scales, NIR machine (Foss UK Ltd., Warrington, UK) |

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| Name any software (including version number) used to produce, prepare, render, compress, analyse and/or needed to read the dataset, if applicable |
| This data was then analysed through SAS. |

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| Do you follow any guidelines to ensure good documentation of your data (metadata)?  If applicable, do you use any metadata guidelines to document the data, e.g. Dublin Core, etc. |
| All data was collected to a high standard of accuracy, using methods detailed in local SOP’s. |

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| Does the data conform to any standards?  If applicable, what standards does this dataset conform to, e.g. INSPIRE, ICOS, ISO 19115, etc. |
| NA |

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| Were any ethical considerations taken into account during data collection?  If applicable, please specify. |
| NA |

## Data-Specific Information

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| Number of variables |
| 5 sward types x 3 Post grazing sward heights  Variables: Foragecontentdrywt, CP,DMD, WSC, yield |

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| Number of cases/rows |
| Sheet 1: 973 Sheet 2: 973  Sheet 3: 217  Sheet 4: 325 |

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| Variable/row and their respective units of measurement  A codebook/data dictionary: variable list, including full names and definitions (spell out abbreviated words) of each variable, relationship between variables, other details needed to better understand the data |
| Treatment/ Treatment code: Treatment 1 - Green: Sward type - perennial ryegrass only  Treatment 2 - Blue: Sward type - perennial ryegrass and white clover  Treatment 3 - Red: Sward type - perennial ryegrass and red clover  Treatment 4 - Purple: Sward type - perennial ryegrass and Plantain  Treatment 5 - Yellow: Sward type - perennial ryegrass and Chicory  PGSH: Post-Grazing sward height  Grassland Yield:  All heights cm DM %  All weights Kgs  Yield: Kg DM/ ha  Density: kg DM /cm  Block: Which block within the experimental design that this paddock is allocated to  Sward Composition:  Grass seed rate/ forage seed rate: Kg/ha  All weight: Kgs  Content: %  DM %  Yield: Kg DM /ha  Forage Content dry wt:% : (Forage yield/ total yield )\*100  Tiller Density:  Columns K-P: Raw count of the number of tillers Columns Q-S: Avg no of tillers per m2  Sward Quality:  BC buffering capacity  CP crude protein  DMD dry matter digestibility  WSC water soluble carbohydrates |

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| Is there any code to support the data?  You may have code (e.g. Python scripts, R scripts, or SPSS or SAS syntax) that aid representation, understanding and reuse of your data. |
| All analyses through proc mixed in SAS |

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| Describe any quality-assurance procedures performed  This may include processes such as calibration, repeated samples or measurements, standardised data capture, data entry validation, data cleaning, or any specific methodology or protocol followed during data collection, analysis, or storage. |
| NA |

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| Environmental/experimental conditions  e.g., cloud cover, atmospheric influences, computational environment, etc. |
| Table 2. Monthly temperature and rainfall data in years 2018-2021 and the long-term average (Met Éireann, 2023) reference period 1981-2010).   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | Annual | | Total Rainfall (mm) | | | | | | | | | | | | | | | 2019 | 84 | 74 | 161 | 68 | 45 | 70 | 71 | 297 | 185 | 115 | 111 | 132 | 1413 | | 2020 | 119 | 249 | 108 | 47 | 50 | 68 | 174 | 110 | 90 | 168 | 148 | 152 | 1482 | | 2021 | 167 | 113 | 102 | 24 | 96 | 30 | 57 | 85 | 88 | 164 | 79 | 115 | 1120 | | 2022 | 57 | 143 | 39 | 52 | 79 | 79 | 66 | 80 | 114 | 199 | 154 | 114 | 1176 | | Long-Term Average | 117 | 88 | 95 | 72 | 75 | 80 | 87 | 108 | 100 | 129 | 120 | 123 | 1193 | | Mean temperature °C | | | | | | | | | | | | | | | 2019 | 6.0 | 7.6 | 7.1 | 9.2 | 10.6 | 12.7 | 15.9 | 15.0 | 12.8 | 9.2 | 5.9 | 6.1 | - | | 2020 | 6.1 | 5.8 | 6.3 | 9.8 | 12.0 | 13.6 | 13.8 | 15.4 | 13.0 | 9.7 | 8.1 | 4.0 | - | | 2021 | 3.9 | 6.2 | 7.5 | 7.9 | 9.6 | 13.2 | 17.1 | 15.6 | 14.8 | 11.4 | 8.2 | 7.1 | - | | 2022 | 6.1 | 7.0 | 6.9 | 8.7 | 12.2 | 13.6 | 16.0 | 15.4 | 13 | 11.8 | 8.9 | 3.2 | - | | Long-Term Average | 5.5 | 5.6 | 7.1 | 8.6 | 11.3 | 13.7 | 15.5 | 15.2 | 13.2 | 10.2 | 7.5 | 5.6 | - | |

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| People involved with sample collection, processing, analysis and/or submission  If they are not include as collaborators, or if you want to describe more carefully who did what |
| Staff on Research demo farm, Teagasc, Athenry, Co Galway |

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| Size of the dataset? |
| 435Kb |

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| What is the format of the dataset?  The format of this dataset file (e.g. csv, .docx, .jpeg,. shp, etc.) |
| Excel spreadsheet |

## Data Update Details

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| How frequently is this dataset updated? |
| |  |  | | --- | --- | | Real-time | Annually | | Daily | Infrequently (e.g. Zenodo) | | Weekly | Ad hoc | | Monthly | Never | | Quarterly |  | |

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| Date dataset updated  The date that the dataset was last updated/modified |
| 20/06/2023 |

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| Period of time covered (start)  The period of time that this dataset covers (start date). |
| 26/08/2019 |

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| Period of time covered (end)  The period of time that this dataset covers (end date). |
| 01/12/2022 |

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| Version  If applicable, version number of the dataset |
| NA |

## Licencing

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| Are there any intellectual property rights (IPR) related to the data?  Provide details if applicable. |
| NA |

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| Is there an open data license associated with the data?  If applicable specify what license is applicable. Data licenses exist on a spectrum from totally open to very restricted. E.g. Creative Commons Attribution (CC-BY). |
| NA |

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| What is the retention period for the dataset?  Defined in either a Licence or a Data Retention Policy, specifies which data will be archived, how long it will be kept, what happens to the data at the end of the retention period (archive or destroy) and any other Funder or other stipulations. |
| 5 years |

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| If the dataset has an embargo, on what date does the embargo end? |
| NA |

## Additional Information

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| What is the geographic coverage of the data?  Human readable description of spatial coverage, e.g. national, Connacht, etc. |
| Teagasc Athenry Co. Galway |

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| Geographical bounding box  Where applicable include westBoundLongitude, eastBoundLongitude, southBoundLatitude, northBoundLatitude. Usually only needed for spatial data. |
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| Does the data have any GDPR Sensitivities?  General Data Protection Regulation. Regulation on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (Data Protection Directive). |
| NA |

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| Does your data contain personal, pseudonymised or anonymised data relating to human subjects? |
| No |

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| Are there any visualisations to accompany the data?  This could be a URL to an online link to visualisations punished in academic papers, Power BI links, or simply a screen grab of a diagram, graph, etc. |
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