ROTHAMSTED RESEARCH

North Wyke Farm Platform

Toward Food Eco Labelling; A Farm Platform Data Collaboration in service of the Food and Drink Sector

What's the issue?

Agriculture and the food supply chain is responsible for greenhouse gas emissions, ecosystem degradation and social costs resulting from poor diet. A better understanding of the true environmental cost of food products should enable food processors and manufacturers to reduce the environmental impact of their products and supply chains and provide the customer with more objective food labelling.

DEFRA has convened the Food Data Transparency Partnership (FDTP) a partnership between government, industry and experts (https://www.gov.uk/government/groups/food-data-transparency-partnership). The FDTP aims to improve the availability, quality and comparability of data in the food supply chain to create a positive change in the food system towards the production and sale of more environmentally sustainable and healthier food and drink.

What did we do?

WRAP, A leading environmental NGO (https://www.wrap.ngo/uk) invited us to join a consortium convened to respond to a DEFRA tender, designed with the guidance of the FDTP, to develop robust environmental impact comparisons of food products. The core of the programme is the development of sophisticated life cycle assessment (LCA) tools to enable objective LCA of food products common in the UK consumer shopping basket. High quality domain data that is findable, accessible, interoperable, and repeatable is critical to LCA and the North Wyke Farm Platform (NWFP) is unique in its ability to provide this data for beef, sheep, and arable farming systems.

The tools will be made available to industry to enable more sustainable ingredient purchasing, development of more sustainable products, and provide evidence to verify progress toward sustainability. The tools will be made available at https://www.hestia.earth/ by the University of Oxford.

What has been achieved?

The project has provided rigorous testing of access to the NWFP data. Data ingestion into the Hestia models has been successful and the LCA models are now able to be piloted and undergo stakeholder feedback.

The project has also proved the importance and value of long-term FAIR datasets for farming systems (pre-farm gate) to our ability to manage and understand the environmental impact of the food chain and food products.

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ONGOING WORK AND DEVELOPMENTS

- It is the ambition of the partners to explore further work with other datasets collected at Rothamsted Research.
- Ensure that data pipelines are in place to enable the continual updating of the Hestia LCA models.
- Explore the opportunity for collecting farm production data for additional farming systems.

This work has driven use of the NWFP data and our data management systems. It has enabled us to better understand our customer service in this area, driven improvement to the web site and facilitated user testing of our emerging data access arrangements (CKAN and API's).

We have identified new opportunities; Our commitment to FAIR data and the Data Management Systems (DMS) being implemented in service to this have put us in a leading position when compared to many universities. Many leading universities have recognised the importance of data, and a swathe of new post graduate programmes are emerging where DMS, FAIR data science and data handling are key components. There is a potential market here for us to develop and sell high quality online content in service to these new awards.